THE GENESEE FARMER.

Vol. XVIII, Second Series. ROCHESTER, N. Y., AUGUST, 1857. No. 8.

CULTIVATION OF WHEAT.

Some years ago, Mr. B. P. Johnson, Secretary of the New York State Agricultural Society, sent the Messrs. Lawson & Son, of Edinburgh, a considerable number of the most approved varieties of wheat cultivated in this country. On trial, they were found to be well-known European kinds. The probability is that nearly all the wheats at present cultivated in this country and in Canada were derived from Europe, and it is much to be regretted that we are unable to identify them. We have been examining the subject, but can make nothing of it, and have abandoned the investigation in inextricable confusion. It is interesting and useful to know the true origin and correct name of any of our commonly cultivated varieties of wheat, and we shall be thankful for any information our readers can give on this point. In the

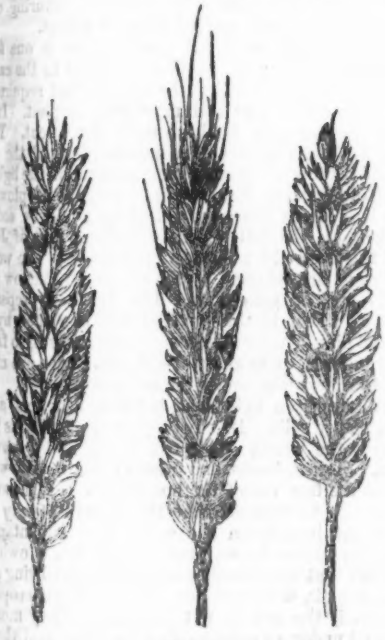


Fig. 1. Fig. 2. Fig. 3.

meantime, we will give cuts and descriptions of a few of the most popular kinds cultivated in Great Britain.

The Chiddam Wheat (fig. 1) is an old and highly esteemed English variety of white wheat; "a free

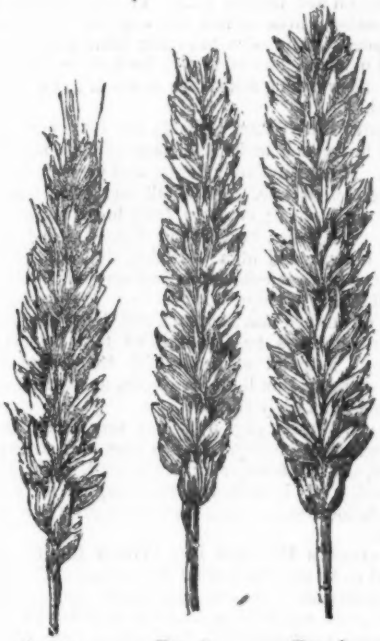


Fig. 4. Fig. 5. Fig. 6.

grower, tall strawed, fine square ear, singularly free from awns, grain round." It ripens early, is not liable to lodge, and is remarkably well adapted to loose, rich soils. It is one of the best English varieties, weighing, in dry summers, 66 lbs. per bushel. A gentleman in Michigan who sowed a sample of it, brought over, in 1851, by Mr. B. P. Johnson, reported it as "a most capital wheat." Mr. M. B. Batham, of the *Ohio Cultivator*, also imported and distributed a number of varieties of British wheats, the Chiddam among them, in 1851, but we have not heard the results.

Fenton Wheat (fig. 2) has a plump, round grain, of a pale white color; ear of moderate length, but very square and evenly shaped. In the February number of the *Genesee Farmer* of this year, will be found an account of the origin of this variety. The

straw is not only very short, but of very unequal height. It yields abundantly, owing, it is thought, to the distribution of the ears through the various heights above the land. On this point, our readers will recollect the account, published in the same number, of some experiments made last year in France with some fifteen varieties of wheat. A mixture of all the varieties produced a larger crop than any single variety,—a result which the experimentor, M. Rousseau, attributed, in a great degree, to the fact that the "ears, not being on one level, are more free, afford more protection to each other, and derive more advantage from light." The Fenton wheat gives the same result, in this respect, as would be obtained by sowing a number of varieties having straw of various heights.

Hunter's Wheat (fig. 3) is one of the oldest and most esteemed varieties in Scotland. It is hardy, tillers well in the spring, and is remarkably well suited to medium and inferior soils. The ear is thickish in the middle, a little awned and tapering to the neck and point; grain of a brownish color, a little elongated in shape, but of a fine, hard, close, flinty texture, and weighing sometimes as much as 66 lbs. per bushel.

White Irish Wheat (fig. 4) has long been cultivated in Ireland, under the name of the *Old White Irish*. It is exceedingly hardy, and very productive, but somewhat late. Straw tall, and more like that of rye than wheat; ears very long, loose, pointed and open; chaff white, smooth and slightly awned; grain large, oblong, and of a brownish, dull color. It is best suited to inferior and medium soils. On rich soils it is apt to lodge. It has been introduced with great advantage into Scotland, and John Haxton, of Cupan Fife, says he is "satisfied that no sort can compete, in point of profit, with the White Irish, when cultivated on light, easy soils, or even on clays, situated in an early climate."

Pearl Wheat (fig. 5) is not very hardy, but of most excellent quality. It has long, stiff straw; ear square, and free from awns; grain small, round, plump and white. It is early, and well adapted for sowing on rich, loose soils. It is sometimes sown as a spring wheat.

Spalding's Prolific Red Wheat (fig. 6).—This is said to be the "best of all the red wheats." Straw tall, strong and stiff; ear long, square, and free from awn; grain round, plump, and of a yellowish color. Morton's *Cyclopedia of Agriculture* says: "On the clay soils of the eastern district of Fifeshire, it has been known repeatedly to produce 64 bushels per acre."

It is quite probable that some of these wheats have been introduced into this country and Canada, and are cultivated under new names. The most approved varieties of wheat in this section at present are the *Soule's*, or the *English Flint*, a bald, white variety; the Improved White Flint; the Blue Stem; and the Hutchinson, or Canada Flint. Some object to the latter on account of its liability to shell out when not cut early. It should be sown thicker than the two former kinds, as it does not tiller so much in the spring. The Australian wheat does not sustain its reputation in this vicinity. On the east end of Long Island, it is cultivated with much advantage. Since the advent of the midge, the chief object in selecting varieties of wheat has been to get the earliest. On this account, the Mediterranean is becoming every year more and more popular. It is a coarse, bearded variety, with a thick skin, and yielding a dark flour; and on good soils, in districts where the midge is not troublesome, is far inferior to the other kinds. It is, however, earlier than any other kind, and frequently escapes the fly when the later varieties suffer much damage. It is productive, and though the flour is dark, it makes excellent bread.

As we have said, the great object with wheat growers, in many sections of the country, is to get varieties that mature early. On this account, the introduction of seed from more northern and southern latitudes is worthy of more attention than it has yet received; for, paradoxical though it may appear, there are many facts which indicate that wheat is earlier when brought either from a warmer or colder climate. In no other country have farmers such facilities for the interchange of seed as in America, and we entertain no doubt that great benefits will accrue from the practice.

Soil best Adapted for Wheat.—A friable loam, or a calcareous, clayey soil, naturally or artificially drained, and abounding in all the elements of plants, is what is generally understood by "a good wheat soil." In England, this phrase always indicates a dry, firm compact soil, of considerable depth. In this country many of our most profitable wheat farms are somewhat sandy, though the calcareous clays are the more durable, and, when well tilled and drained, the most productive. No one, however, who has seen the magnificent crops of wheat which are now raised on the light, sandy soils of Norfolk, or the fens of Lincolnshire, or on the thin chalks of other districts of England, can doubt that any kind of soil, when drained, cleaned, and enriched by judicious manuring, can be made to produce paying crops of wheat.

Preparation of the Soil.—If there is one fact more prominent than another in regard to the cultivation of wheat, it is that the wheat plant requires a firm foot-hold. The soil must be compact. It is quite easy to work land too much for wheat. This may be one reason why a modification of the old summer fallow is becoming more general on the lighter soils of Western New York. Instead of plowing the land three times, as formerly, a clover sod is broken up the latter part of June or first of July, and this is all the plowing that is done. The weeds and grass are subdued by the use of the harrow and cultivator, or gang-plow. The cost of preparing land for wheat in this way, is much less than by repeated plowings, and the crops, in most cases, so far as we can learn, quite as good—though there are many good farmers who prefer the old practice.

Fallowing on light land is not as beneficial as on rich, clayey soils. Its chief object on such soils is to destroy the weeds. This can be done by growing corn, potatoes, beans, and other crops, in rows which admit the free use of the horse-hoe. It is, however, a mistake to suppose that the growth of *any* crop does not impoverish the soil. The advantage of growing clover, beans, peas, turnips, &c., is owing to the fact that they obtain considerable fertilizing gases from the air, dews and rain. But if these crops are removed, the soil is not enriched. They must be plowed under, or consumed on the farm, and the manure made from them returned to the soil—otherwise the land will be made poorer, instead of richer. Soils containing a portion of clay, or, more definitely, the double silicates of alumina and lime, soda, &c.

are much benefited by summer fallowing, from the fact that, when exposed to the air, they attract and retain ammonia. Hence, summer fallowing on such soils actually enriches them. Sandy soils, to a great extent destitute of the double silicates, cannot absorb and retain ammonia; and summer fallowing does not *increase* the ammonia in such soils, though it may, and probably does, render available some portion of the ammonia locked up in the organic matter of the soil. But as light upland soils are generally deficient in organic matter, it is unwise to resort to summer fallowing, even though, for a few years, it may be followed by good crops of wheat. It is far better to grow clover and other crops which obtain ammonia from the atmosphere, and plow them in, or consume them on the land.

Sowing the Seed.—In districts affected by the midge, wheat should be sown the first or second week of September. If earlier than this, there is danger of injury from the Hessian fly. We are advocates of thick seeding. When wheat is sown thin, it tillers considerably in the spring, and its ripening is retarded frequently a week or ten days, and is, consequently, more liable to injury from the midge. Two bushels per acre is none too much. If wheat could be hoed in the spring—as we believe it might in many places, with considerable advantage and profit—it should of course be sown with the drill, in rows ten or twelve inches apart. Where wheat is not hoed, there is not much advantage in sowing with the drill. In our opinion, it is better to have the grain scattered as evenly as possible over the whole ground, as it is then more likely to keep the weeds in check than when a portion of the land is bare, as is the case when the wheat is drilled, or cultivated, or plowed in with the gang-plow. Many good farmers, however, entertain a different opinion, and we should be glad to hear from any of our readers on this point, who are not interested in patent drills, cultivators, or gang-plows.

Where wheat is liable to injury from *smut*, the seed should be prepared by wetting it with diluted, fermented chamber lye, and drying it with quick lime. Moistening the seed with a solution of blue vitriol, *(sulphate of copper,)* is an effectual remedy. For each bushel of wheat, dissolve three or four ounces of blue vitriol in a quart of hot water. Let it cool. Then spread out the wheat on the floor, six inches thick, and sprinkle the solution over it, and turn over the wheat till it is all moistened. It may be sown in two or three hours, but it is better to do it over night, as the vitriol has then a better chance to kill the spores. This remedy is more effectual, simpler and cheaper than chamber lye, or salt and water and lime. Salt and water, when too strong, we have known to injure the seed. It is, however, frequently used.

PREMIUM CROP OF CARROTS.

The New York State Agricultural Society has awarded the premium for the best crop of carrots to John Brodie, of Rural Hill, Jefferson Co., N. Y. The last *Journal* of the Society contains an interesting statement of the method of cultivation, from which we make a few extracts:

"The soil sandy loam, and when the farm was purchased, in 1852, by father of applicant, the ground from which the carrots were taken was a worthless swamp, of about three acres, through which cattle could not pass—it being overflowed spring and autumn. In the summer of 1852 it was drained—stone drains being laid—at a cost of $32.33 per acre. In the spring of 1853 it was plowed and planted with corn, which yielded 80 bushels per acre. In the spring of 1854, twenty horse cart loads of manure per acre, and sowed to carrots. In the spring of 1855 it was sowed again to carrots, without manure, and on one measured acre the yield was 1,700 bushels. In the spring of 1856 one acre was surveyed, thirty horse cart loads of mixed horse and cow dung, and four barrels of bone dust, spread and plowed in. Carrot seed was drilled in with a Scotch machine, that sows and rolls at the same time—using half a pound of large orange and one and a half pounds of white carrot seed, in rows nine inches apart. On the 3d of July passed through with a cultivator, and on the 12th of July gave it the first weeding. July 16th, went through with the cultivator a second time, and on the 18th and 19th of August gave it the second weeding.

"The yield from the measured acre was 1,610 bushels of carrots, weighing 60 lbs. to the bushel. The yield of the white carrots was much greater than that of the orange. No difference was perceived in the yield of those parts where bone dust was or was not applied.

"The cost of the crop, including interest on land, ($8,) was	$49.21
The value of crop, at 20 cents per bushel,	322.00
Leaving a balance in favor of crop of	$272.79

"The above statement was verified."

THE HORSE CHARM;

OR, THE GREAT SECRET FOR TAMING HORSES.

We find the following going the rounds of the agricultural papers. We give it to our readers for what it is worth:

"The horse-castor is a wart, or excrescence, which grows on every horse's fore legs, and generally on the hind legs. It has a peculiar, rank, musty smell, and is easily pulled off. The ammoniacal effluvia of the horse seems peculiarly to concentrate in this part, and its very strong odor has a great attraction for all animals, especially canine, and the horse himself.

"For the oil of cumin, the horse has an instinctive passion—both are original natives of Arabia—and when the horse scents the odor, he is instinctively drawn towards it.

"The oil of Rhodium possesses peculiar properties. All animals seem to cherish a fondness for it, and it exercises a kind of subduing influence over them.

"The directions given for taming horses are as follows:

"Procure some horse-castor, and grate it fine. Also get some oil of Rhodium and oil of cumin, and keep the three separate in air-tight bottles.

"Rub the oil of cumin upon your hand, and approach the horse in the field, on the windward side, so that he can smell the cumin. The horse will let you come up to him then, without any trouble.

"Immediately rub your hand gently on the horse's nose, getting a little of the oil on it. You can then lead him anywhere. Give him a little of the castor on a piece of loaf sugar, apple or potato.

"Put eight drops of oil of Rhodium into a lady silver thimble. Take the thimble between the thumb and middle finger of your right hand, with the fore finger stopping the mouth of the thimble, to prevent the oil from running out while you are opening the mouth of the horse.

"As soon as you have opened the horse's mouth, tip the thimble over upon his tongue, and he is your servant. He will follow you like a pet dog.

"Ride fearless and promply, with your knees pressed to the side of the horse, and your toes turned in and heels out; then you will always be on the alert for a shy or sheer from the horse, and he can never throw you.

"Then, if you want to teach him to lie down, stand on his nigh, or left side; have a couple of leather straps, about six feet long; string up his left leg with one of them round his neck; strap the other end of it over his shoulders; hold it in your hand, and when you are ready, tell him to lie down, at the same time, gently, firmly and steadily pulling on the strap, touching him lightly on the knee with a switch. The horse will immediately lie down. Do this a few times, and you can make him lie down without the straps.

"He is now your pupil and friend. You can teach him anything—only be kind to him, be gentle. Love him, and he will love you. Feed him before you do yourself. Shelter him well, groom him yourself; keep him clean, and at night always give him a good bed, at least a foot deep.

"In the winter season, don't let your horse stand out a long time in the cold, without shelter or covering; for remember that the horse is an aboriginal native of a warm climate, and, in many respects, his constitution is as tender as a man's."

HOW NATURE IMPARTS FERTILITY TO LAND.

Every farmer who would master the science of Agriculture, and rise to the full height and dignity of his noble calling, should diligently study the ways and means employed by Natuure to impart fertility to land, and bring both its vegetable and animal products to the highest perfection. He should learn, if practicable, what elements, and in what conditions, give rise to the great diversity of soils witnessed in all countries. From a few very common and abundant substances, like air, water and earth, Nature forms an endless variety of plants and animals, and soils in every respect adapted to the peculiar wants of each species. The natural requirements of plants and animals, however, are mainly uniform and simple; so that less than twenty elementary bodies, and ordinarily no more than fourteen, enter into the composition of all organized beings, whether they belong to the vegetable or animal kingdom. Indeed, judged by their cellular structure and early growth, the vital germ in a seed, and in an egg, appear to have no other difference than the obvious fact that one is endowed with the life of its plant parent, and the other with the life of its animal parents; so that, as development proceeds, from one may emerge an oak, and from the other a reptile or a bird.

Viewed in their relations to plants, soils may be said to grow as much as a forest tree, not in the same way, nor does a child or a pig grow like a plant, yet both grow, nevertheless, as does also the natural fruitfulness of the land that supports them. If we inquire what substance most promotes the development of all the organized and varied beings in the world, *water* will be found fairly entitled to that distinction; for it not only constitutes, in its elements oxygen and hydrogen, over forty per cent. of their solids, but it alone dissolves their aliment, and gives that freedom of motion without which no seed could possibly germinate, and no ovum produce its young. Water being an universal solvent, is no less active and useful in preparing land for the support of plants and animals, than in preparing the primary cells in the germs of the latter for all their subsequent evolutions and parental functions. It is water that conveys carbonic, sulphuric, silicic and phosphoric acids, united with potash, soda, lime and magnesia, from a soil into the trunks of gigantic forest trees, to remain there for centuries, until they die and decay; it also carries into the earth which surrounds their roots a full equivalent of the substances named. Hence, when an aged oak, poplar or walnut has largely drawn on the soil for two or three hundred summers for the alkalies stored up in its roots, body and numerous limbs, the ground is not exhausted, but, in the wise economy of Nature, the water that has come up from the earth below to supply the place of that evaporated from its countless leaves, has brought with it the elements of fertility annually consumed by this long-lived and gigantic plant. Sand, clay, and rocks, which are pervious to water and air, never refuse to yield some minerals needful in the growth of both vegetables and animals, when rain or snow-water percolates through them. Water charged with carbonic acid, derived partly from the atmosphere and partly from passing through vegetable mould in the soil, has a much greater solvent power over both the carbonate and phosphate of lime, the silicates of potash and soda, and other earthy salts, than pure distilled water would have. The decay of annual weeds, grasses and forest leaves, yields not only valuable organic acids, including carbon, but *ammonia*, which, like potash and soda, according to Prof. Way, renders silica soluble in water.

All the food of plants being dissolved in water, and that having the most perfect freedom of motion between its particles, we have only to find adequate physical causes for the general distribution of water to account for the almost universal productiveness of the earth. The daily evaporation that takes place from oceans, seas, lakes, rivers, plants and the naked earth, and the fall of water in rain, snow and dew, are too well known to need any remarks in this connection. They often give rise to an excess of water in many soils, which need draining; for it is *moving* water that feeds and enriches land, not that which is stagnant.

To facilitate the ascent of water through a hard-pan, or some impervious stratum, of more or less thickness, it should be perforated on the same principle that Artesian wells are bored in Alabama, France and other countries. Science teaches the art and wisdom of fertilizing soils equally from the earth below, and the air above. This is precisely what Nature does in recuperating the old fields of the Southern Atlantic States, without the assistance of man. With his aid, if skillfully rendered, the resources of partially impoverished land may be more rapidly improved and augmented. He must assist Nature, not counteract her beneficent purposes. In all hot climates, *irrigation* has been found, by the experience of ages, most conducive to agricultural production, especially where water is highly charged with the elements of crops. Some rocks yield an incalculable amount of the earthy constituents of plants, and thus fertilize not only the land in their immediate vicinity, but sometimes soils thousands of miles distant from them. There are alkaline springs near the summit of the Rocky Mountains, some that yield potash, others soda, in large quantities, more or less of which will be left in every rood of low land covered by creeks and rivers as their waters flow easterly into the Gulf of Mexico, or westerly into the

Pacific. It is easy to understand how the food of sugar cane may be taken from the mountain gorges in New York and Pennsylvania, where the Allegany River rises, and conveyed down the Ohio and Mississipi, to be finally left in the loam and clay of Louisiana for the benefit of the sugar planters. Large and universal as is the distributing power of moving water, whether running on the surface of the earth or below it, in the economy of Nature, it is capable of indefinite extension by the knowledge and industry of man. Educated farmers should carefully investigate this matter, and weigh well the fact that it is mainly the mineral and vegetable atoms brought from distant hills and mountains that form the richest alluvial bottoms; and that land equal to such bottoms in fertility may be formed by the aid of moving water, even on the declivities of an upland farm. In one sense, hills may be regarded as manure heaps, although not often as soluble as one might wish; yet, rain-water dissolves not a little of the substances that improve any soil through which it may percolate, and on that account it is wise to irrigate, as far as practicable, all uplands, just as low ground is so often, and advantageously, irrigated by Nature. In many places on side-hills, one may dig wells till water is found, and then excavate the earth on the lower side, so that living springs are formed, whose perennial flow will be alike useful for live stock, and for enriching many acres of land. Spring-water never fails to abound in the fertilizing elements of the earth and rocks through which it has passed. These elements are both organic and inorganic, as may be seen by simply evaporating a gallon or so of the water to dryness. Berzelius gave the names *crenic* and *apocrenic* to two acids of organic origin, because he first found them in spring water. *Krene* is the Greek name for spring. Ususally about half of the dry residuum is combustible, like ulmic and humic acids, and the other moiety incombustible earthy salts. The character of these dissolved substances depends on the composition of the clay, sand, stones or rocks with which spring-water has been in contact. Where the ground, and especially the rocks below, are permeable to water, and abound in soluble minerals, as is the case with the Onondaga Salt Group, one would naturally expect to find many mineral springs—and such is the fact in all quarters of the world. In his work on the *Minerology of the State of New York*, Dr. Beck describes a spring in Byron, Genesee county, that issues from the Onondaga Salt Group, whose volume is large enough to drive a small grist mill, the water of which is so charged with sulphuric acid as to char vegetables about the spring. Could the acid that issues from the earth at this point in twenty-four hours be conveniently saturated with lime, it would yield daily several tons of gypsum. Sulphur springs abound in Western New York, and as the sulphur needs only a chemical union with oxygen to form oil of vitriol, one is at no loss to comprehend how plaster beds grow in that limestone region. Dr. Hadley found ten and a half grains of gypsum in a pint of the water taken from one of the Avon springs. Epsom and glauber salts, or the sulphates of magnesia and soda, are only a little less abundant.

No other group of rocks of the same age in America is so rich in the mineral food of plants as the Onondaga Salt Group, if there is any of any age that equals the rocks in question. Some of the more recent formations in Southern Georgia, Alabama and Florida, are richer in the phosphate of lime, and the remains of marine animals, which will form the subject of a separate article, in connection with the agricultural resources of Upper Georgia.

Heat, frost, electricity, light, atmospheric air, with its oxygen, carbonic acid, rain, snow and dew, are the principal agents employed by Nature to augment the fruitfulness of the earth, using at the same time, and for the same purpose, both vegetable and animal Vitality. Besides these, Nature has ever at her service *gravitation*, which acts on masses of matter at sensible distances, and *chemical affinity*, which operates on molecules, or atoms, at insensible distances from each other. In these facts, which are in no respect exaggerated, may be seen the elements of astronomy, geology, chemistry, meteorology, vegetable and animal physiology, and natural philosophy. No intelligent mind can devote a few years to the earnest study of the primary sources and causes of fertility in land and not be convinced that it is dealing with a truly noble department of Science. It is impossible in a short article, hastily written, like the present, to do anything like justice to so large and important a theme. There are chemical changes wrought at and near the surface of the ground, which operate to increase its fruitfulness, that cannot be satisfactorily explained without assuming much as already known by the reader, or giving a lengthened exposition of elementary principles, which, in either case, would appear unprofitable to many. To the writer, it is satisfactory to know that Science, in its application to agriculture, as to all other industrial arts, is steadily advancing, and that its ultimate triumph over all opposition is certain. If it cannot always create an *oasis* in a desert, it can sometimes bring one to life and fruitfulness, when about to be lost forever, as the following recent facts will show: In a late number of the *Moniteur de l'Armies*, (a French military journal,) there is an interesting account of the boring of an Artesian well at Sidi Rached, in Algeria, by a French engineer. The oasis that supported the village had become nearly burnt up, and threatened to disappear altogether, from the want of water. Some knowledge of geology as applied to water-bearing strata in connection with the subject of Artesian wells, satisfied the engineer that an artificial fountain was attainable. Boring to the depth of only fifty-four metres, (about one hundred and fifty-seven feet,) he perforated the impervious stratum, and reached one filled with water, which sent up above the surface of the ground *a thousand gallons per minute*. The scene is thus described by an eye witness:

"At the moment of the water's bursting forth, no Arab was present, but the news quickly spread, and in a few minutes the whole population of the village was to the spot, and threw themselves upon the works with such phrenzy that force was necessary to remove them. Women and children lay down in the stream, as if they had never seen water before. The Sheik of Sidi Rached could not repress his emotion; he threw himself on his knees, and wept for joy. The next day the inhabitants of the neighboring villages came to thank the engineer, and bless the fountain, while in the evening there was a dance and a grand merry-making, and this festival was kept up six days. In the mean time, the people went to work and constructed a sluice to convey the vivifying stream to the portion of the oasis which was dead from the want of moisture."

Such is the service of Science to man in a desert of Africa. In a thousand ways, it renders his life more valuable to himself and to his posterity; for no one will deny that an existence at Sidi Rached is truly worth more with a living fountain that yields a thousand gallons of pure water every minute, than it would without any advantage of the kind. There are already nearly one hundred such Artesian wells in the United States; and tens of thousands might aid in fertilizing American soil. In connection with the improvement of land, the readers of the *Genesee Farmer* will permit an old friend to commend to their favorable consideration the subject of Agricultural Engineering. D. Lee.

Athens, Ga.

ITEMS SUGGESTED BY THE JULY NUMBER.

A week of "real summer weather" has brought vegetation forward amazingly—corn is coming on under its influence—clover is in blossom, and the wheat already in the ear. The *midge* is here, too, but time must determine what share of our crop it takes this year. Our fields *look* like twenty-five bushels per acre, though the wire-worm has made some thin spots too poor for five.

Buckwheat.—A "precarious crop," truly, according to my experience. Sowed some last year on a good, but heavy soil—the weather was too dry to bring it up for a long time, and at last it was cut off in all its luxuriant growth and blossoming by an early frost. Plowed it under and sowed on wheat, and looked for our breakfast-cakes from our more fortunate neighbors. Shall try it again in a few days—some have sown already.

Cutting and Curing Clover.—There never was brighter, better clover hay made, than we saved last season. It was cut when fully in bloom, allowed to wilt in the swath—then raked up and cocked to stand over two nights—and drawn in generally without further stirring. Thus placed in the mow, still damp, not with water, but its own sweet juices, most of it came out in the winter like well preserved specimens from an herbarium, its colors bright, its leaves all clinging to the stalks, and all of it was of superior quality. To the old-style farmer, this hay seemed too damp to keep in the mow—but it did keep, and several years' trial of the same method has convinced me that it is no use to dry clover until the leaves half crumble to powder—that its value is nearly double in the fresher state.

Cheap and Commodious Stable.—I like this plan of J. F. F's—it is *suited* to the wants of the farmer, and hence a real addition to the valuable contents of your journal. The manure should be taken from the stalls twice each day, and intermixed with that from the cows' stable, under some of the sheds surrounding the barn-yard. A better supply of windows for lighting the stable, would be advisable, in my opinion. A dark stall injures the sight of the horse kept therein.

Women Folks Milking.—This subject is pretty fully discussed in the July number. *Apropos* of T. M. W.'s remarks on the testimony of the cows themselves against women milkers—some cows speak just as strongly the other way—refusing to let a man come near them.

Butter Making.—Your Jefferson Co. correspondent gives us a truly suggestive article on this subject, and he reasons it out well. I mean to give his plan a trial—for I have often thought it a needless thing to put in extra salt just to work it out again as soon as dissolved, as is the general practice. His hints in setting milk are also worth heeding. I have noticed that the cream did not rise alike on different shelves in the dairy, and now see that it was because the fresh milk was set under that set the morning or evening before, and its heat affected it.

Wheat after Barley.—I plead guilty to sowing wheat after barley, but the clover seed failed, and we gave an intermediate dressing of muck, twenty-five two-horse loads to the acre. The wheat is now looking very well. I shall probably do the same on a small scale this fall; but when the farm is arranged and improved as I am *trying* to have it, I shall not sow wheat after barley, and only after clover, with fine manure harrowed in with the seed.

Farm Accounts.—I heartily agree with Mr. Reynolds in regard to farm accounts. It is no great trouble to keep them, and it *is* a great satisfaction to know the results of your labor—besides giving many useful lessons to the farmer himself.

—Pleasant as the task is, I can itemize no further. I have hurriedly written this while watching by the sick-bed. The reader will please excuse all failure, as you, Mr. Editor, will sympathizingly do, I am sure.

Niagara Co., N. Y. B.

NOTES FOR THE MONTH, BY S. W.

Corn Rotting in the Ground.—The corn and sorghum planted on the tenth of May came up well, after ten days of cold, wet weather, and several frosty nights. This is another proof that it is not cold, wet weather that rots corn in the ground. But other rows of corn on the same tile-drained soil, planted on the fifth of June, did rot in the ground this season, owing to ten days' continuous floods of warm rain. Hence I take it the corn remains safe in the cold, wet weather, and only rots in warm and very wet weather.

Turnips among Corn—Radishes and Beets between Sorghum.—The *American Agriculturist* says: "Sow turnips at the last hoeing among corn." I have done this repeadly after suckering the corn, and never got anything but wormy little turnips, with large tops; but I have no turnip soil, and do not live, thank Heaven, in a turnip climate, where, as Greeley says, the sun resembles a boiled turnip. The best turnips I ever saw, were grown at foggy Newport, R. I., in the spring. In this dry climate I could never grow a good one; they grow so slow that insects destroy them. But turnips grow large, even here, on a new, porous, vegetable soil; but they have no sweetness, and turn pithy in a week after they are marketed. Sorghum is of so slow a growth that radishes or beets may be grown fit for the table before the former is a foot high. My early planted corn is now, this sixth of July, more than two feet high; sorghum, in the next rows, planted the same day, is only eight inches high, but it is healthy, strong, and full of suckers. It is a very hardy grass that does not wilt in transplanting. Methinks it must be both thinned and suckered before it can grow to sugar cane.

Tomatoes among Corn.—Some of the best tomatoes I have, are left where they come up from self-

sown seeds among sweet corn. The moment the green ears are picked, cut up the corn, and the tomatoes, before small and spindling, now spread and gain strength with great rapidity, leaving bushels for the cows when the vines are cut by a late October frost.

Scarcity of Farm Stock.—Here are three large distilleries, giving away or selling for a trifle most of their slop, because they cannot stock either their cattle-sheds or hog-pens; with enormous prices, our farmers have nothing to sell. But to show that the farmers, and not the seasons, are at fault, here is a farmer who winters a large stock well, and he says he has, since the first of January, sold $700 worth of corn, hay, &c., all to *shiftless farmers*, without hauling away a single load to sell at the villages. Many of these farmers, he says, have sent money West to buy land, or to loan at Western interest, while they let both land and stock starve at home. Some of them sold their corn early at fifty to sixty cents a bushel, and bought of him, in April, at seventy-five cents.

Prairie Hay and White Butter.—In my last, I adverted to the advantages of a grass-growing country as compared with those of the corn-growing region of the West and South-west. A lady, writing from Ossawatamie, Kansas, says: "To be two months without butter, gives one her first notion of its full value." But the butter from prairie grass is white, aromaless, and in stinted supply at that. She advises her brother not to bring his Chautauque horses to Kansas, as they are too quick for the sloughy roads, and may not relish, much less thrive on, prairie hay. But she also gives the bright side of the picture, *con amore*. Tomatoes in blosssm and wild strawberries ripe on the first of June, and radishes for tea on the seventh; then the large, smooth gooseberries, and wild plums growing in wild profusion; the everlasting prairie, blooming with many floral specimens, known here only as house-plants. But then there is a paucity of timber and shade trees, except along the creek bottoms, where no man can stay with impunity until cold weather has expelled both mosquitoes and miasma. There are thirteen inhabited shanties in sight from her log cabin, and many more the other side of the knoll, some of which have a family holding two or three *claims*, and every claim is taken up for many miles beyond. The lowest price, even for an open prairie claim, at second hand, was $350. The Hoosier they bought of left a table, which, after being scraped and washed with weak lye, was a fine substitute for their awkward, cumbersome dry-goods box. But all are in happy exhilaration, amused rather than annoyed or tried by their daily make-shifts and sore privations—relieved always by success and happiness in continual perspective. Even when the prairies dry up blossomless, and the cows fail to give milk, the mighty ears of Indian corn come forward in such abundance as to do away with all fear that hog and hominy will ever again fail; and if health continues, ever-blessed custom soon reconciles both man and woman to the circumstances around them. As all are now in the same category, the equality of social privation makes it not only endurable, but even interestingly picturesque. When a few families, by industry and thrift, get so far ahead of their neighbors as to furnish a painted house, then, and not till then, will social troubles begin.

Waterloo, N. Y.

THE MAY-BEETLE.

Mr. Harris:—The "field grub," of which such a clear and exact description is given in the interesting communication of Mr. Adams, is plainly the larva of an insect of the group or tribe named Melolonthidæ, in the order Coleoptera; and I presume the insect into which these grubs will change, is our common "May-bug," or May-beetle, as it ought to be designated*—though, as we have several other insects nearly related to this, and possessing probably the same habits, it may possibly be one of these. This can only be conclusively ascertained by watching these grubs until they complete their growth, and issue from the ground in their perfect or winged state. As it is so very probable, however, that these grubs are the larvæ of the May-beetle, I send you an account of this insect, it being a vile culprit, both in its larva and its perfect state. And if the field grub of which Mr. Adams solicits information is not this very insect, it will be a kindred one, closely similar to it in every respect.

It is a matter of the utmost importance to ascertain the correct scientific name of an insect, a plant, or other natural object—for, though unfortunately such name is often most ungainly and difficult to pronounce by common persons, it still has the great recommendation that it clearly and definitely specifies the very thing to which it refers, all the world over, and will continue to be the name of that thing through all coming time; whereas, common or popular names are liable to differ in different neighborhoods of the same country, and to be changed from time to time. Scientific names are composed of two words, and are quite analagous to the names of persons—one of these words being the generic or family name, and the other the specific or baptismal name. The former name may change from time to time, as when a woman becomes married or re-married; but the specific or baptismal name is never changed. A false name, however, or as we commonly term it, *a nickname*, may happen to be given to a person quite extensively, but no gentlemen will apply that name to him when informed that it is not his original baptismal name. Such names, in science, are termed synonyms. Though many of the readers of the *Genesee Farmer* may already be familiar with this subject, I presume others of them will understand more clearly what is to follow, from the explanation now made. As the May-beetle is one of our most injurious insects, it is particularly important that its correct scientific name be well ascertained and definitely established. And we regret that the position in which this matter at present stands is such that we are obliged to make an unpleasant exposure, yet one which it is impossible to avoid in elucidating the topic before us.

As to the generic name of this insect, some confusion has arisen among authors, from a most disin-

* The custom of calling all insects "bugs," is often denounced as being an Americanism; but this, like many others of these reputed Americanisms, we obtained from our father-land. Thus, the European analogue of the insect we are treating upon, we see is termed the May-*bug* in the English translation of Kollar's Treatise—a clear evidence that we have obtained the name which we give to our insect, from England. And in several other instances, the name *bug* will be met with in British publications, applied to beetles. Still, every person intelligent upon this subject is aware it will be an improvement in our language to give the name *beetle* to all hard, crustaceous-coated insects, which belong to the order Coleoptera, and restrict the name *bug* to the order Hemiptera, or those flat-backed insets which emeit the same disgusting scent as the well-known bed-bug.

genuous statement (to use as mild a term as the circumstances will allow) made by Dr. HARRIS, in his *Treatise on Injurious Insects*, page 28 of the first edition, 26 of the second, where he says the genus *Phyllophaga* was "proposed by me in 1826. DEJEAN subsequently called this genus *Ancylonycha*." Now, the number of the *Massachusetts Agricultural Repository* in which Dr. HARRIS' essay appears, (vol. x., pages 1—12,) bears the date of July, 1827! and the name *Phyllophaga* is there merely suggested for this insect and its kindred, without any statement of the marks by which the group can be recognized. In the year 1827, also, a distinguished British entomologist, Rev. F. W. HOPE, published the first part of his *Coleopterist's Manual*, in which this same group is distinctly set apart and clearly characterized, and the name *Lachno-sterna* (i. e., hairy-breasted) is given it. This, name, therefore, is clearly the one which the established rules of scientific nomenclature will give to the genus to which our insect belongs, DEJEAN'S name, mentioned above by Dr. HARRIS, not having been proposed until some years later. It is truly painful to meet with such instances of a lack of candor, which must ever remain as blemishes upon the reputation of one now in his grave, who has done so much to advance this branch of science in our country, and done it so well. Let it impress upon us who come after him the maxim, that, in all cases, "honesty is the best policy."

This insect has hitherto been generally entered under the specific name *quercina*, but Dr. LECONTE has recently ascertained that nearly ten years before his name was given to it, FROHLICH, a German naturalist, had in the year 1792 described it, under the name of *fusca*.

We thus reach the conclusion that *Lachnosterna fusca*, a term meaning blackish hairy-breast, is the correct technical name of our common May-beetle, which has so often hitherto been called *Phyllophaga quercina* in our agricultural periodicals.

This insect is also frequently termed "horn-bug," being confounded with a larger, perfectly smooth and more flattened beetle, (*Lucanus capreolus*, LINNÆUS,) which comes out later in the season. It is thus called more particularly, when, like the true horn-bug, it flies in at the open windows of our dwellings upon warm evenings, which both of them frequently do, to the great annoyance and even terror of the female portion of the household. Neither of these insects, however, can harm our persons; and when they intrude into my room in this manner, I find the quickest way to dispose of the pests, is with my fingers to hold their heads in the candle a moment or two, and then toss them out the window.

The May-beetle is a very thick-bodied, glossy insect, somewhat less than an inch long and nearly half as broad, varying in color from chestnut-brown to black, its legs of a lighter mahogany-red, and its breast pale and coated over with grayish-yellow hairs. Two or three straight, elevated lines are also discernible, running lengthwise upon its wing-covers.

Early in spring, in spading or plowing the ground, these beetles are frequently exhumed, or sometimes, in turning over a large stone, one of them will be found beneath, lying in a smooth cavity or little round hollow in the dirt, like a chicken in its shell. This cavity, or cell, is formed by the grub in the preceding autumn. Turning itself around and around, it presses upon and compacts the dirt and moulds it into this cell, for its winter residence; and in this state it changes first to a pupa, in which the legs and wing-cases of the insect are seen in their rudimentary state, and afterwards to a beetle, such as we have above described. This beetle lies dormant in its cell until the warmth of the incoming summer penetrates the ground sufficiently to awaken it into activity. It then breaks from its prison, and works its way out of the ground.

These beetles begin to make their appearance each year about the first of May, and become most numerous in the middle of that month. They are sluggish, inactive, and seemingly stupid in their movements. They repose during the day-time, hid in the grass, or any other covert which they find. At dusk, they awake and fly about slowly, and with a humming noise, hitting among the leaves of the trees and clinging thereto, and feeding upon them. They are most fond of the leaves of the cherry and plum, which trees they every year injure more or less, and occasionally they congregate in such numbers as to wholly strip them of their foliage, destroying all hopes of any fruit from them that season. An instance of this kind was communicated to me four years since, by MILO INGALSBE, Esq., of South Hartford, at that time President of the Agricultural Society of this (Washington) county. He had seventy plum trees, and a number of cherry trees, of the choicer varieties, which never gave fairer promise of an abundant yield of fruit than at that time. But a swarm of these May-beetles suddenly gathered upon the trees, many of them being then splendidly in bloom, and and in two nights, the 15th and 16th of May, wholly stripped them of their foliage, so that many of them were as naked as in winter. With their humming noise, these beetles were flying about the trees every evening until about ten o'clock, when they would settle in clusters of eight, ten, twenty or more, and would thus remain until daylight, when they would tumble down from the trees, flying but little, however, and hiding themselves wherever convenient, to stay through the day. These observations are important, showing that between midnight and daylight is the best time for spreading sheets beneath the trees, to shake and beat these insects into them. In a subsequent letter, dated June 29th, Mr. I states that these beetles had then disappeared from all his trees except an Ox-heart cherry, on which about a dozen were found, this being the choicest variety among his cherry trees — indicating that though seemingly such stupid creatures, they are good connoisseurs in selecting their food. And among his plums, it was the Washington, Jefferson, Lawrence, and others of his best kinds, which had been attacked with the greatest avidity. Apple trees, which were standing alternately with his plum trees, were not in the least molested. Meeting Mr. I. a few days ago, I learned that his trees have never been re-invaded by these beetles since that time.

These insects are numerous all over our country. In my own neighborhood they have been common every year, I think, since I first became acquainted with them, more than twenty-five years ago; yet I have here never known the trees to be stripped of their foliage by them, or the turf to be severed by their larvæ, although two or three instances of the latter have been related to me as having occurred in this town, and I have several times heard of the same phenomenon in other places. It appears to be

most singular and remarkable circumstance in the economy of these insects, that, while it is their ordinary habit to live dispersed and apart from each other, they at times become gregarious, both in their larva and their perfect state, multitudes of them assembling together in a flock, and by their conjoined labors utterly devastating what they attack. Some other insects, however, show this same habit. It is only occasionally that the migratory locust of the East, so renowned in story, congregates together in swarms and flies off to a distance. And instances have occurred in which the common red-legged grasshopper, which is scattered about the fields of our own country, has done the same, in years when it has been unusually abundant.

The history of our May-beetle, and its transformations, have never been fully observed; but everything known respecting it, concurs to show that it is exactly analagous to the cockchaffer or May-bug of Europe, (*Polyphylla Melolontha*, Linn.,) and occupies the place of that species upon this continent. The grubs of that insect are about five years in obtaining their growth. The beetles pair soon after they come from the ground, and the male lives but a few days. The female crawls back into the ground and there drops her eggs, which are nearly a hundred in number, after which she again emerges, and being now decrepit with age, she feeds but little and dies in a short time.

Among the natural destroyers of our May-beetle is the skunk, whose food appears to consist of these insects almost entirely, during the short period of their existence. Some cats will also eat them, though I suppose it to be more for sport than food that grimalkin is frequently seen at twilight stealthily creeping through the grass of the door-yard, and springing upon these beetles as they crawl therefrom to take wing. Our domestic fowls are also very fond of the grubs. But of all the destroyers of these insects, no other animal can vie with the crow, which frequently follows the track of the plow, to feed upon the grubs of the May-beetle which are turned up thereby.

With regard to remedies, we may observe that in Europe the experience of centuries has failed to discover any efficient measure for destroying a similar insect during the larva period of its existence. And concealed in the ground as these grubs are, it is not probable that any substance can be applied to the soil, of sufficient power to destroy them, without destroying also whatever vegetation is there growing. But where these grubs are so numerous as to sever the roots of the grass and pare the turf, in the manner related by Mr. Adams, I think there is a measure which may readily be resorted to, whereby they may be exterminated; whereas, if they are permitted to remain unmolested, their ravages will probably continue to extend farther and wider, and another generation will succeed them, which perhaps will be more numerous than the present. I would recommend the placing of a temporary fence around that part of the meadow or pasture which is so thronged with these grubs, and enclosing a number of swine therein, thus for a while converting the patch into a hog pasture. The propensity of these animals for rooting and tearing up the turf, we are all aware, is for the very purpose of coming at and feeding upon the grubs and worms which are lurking therein; and who knows but this rooting propensity, which has all along been complained of as being the most troublesome and vicious habit which belongs to swine, may after all turn out to be the most valuable and necessary to us of any of the habits with which they are endowed? At all events, it is one of man's greatest achievements to so observe and study the habits and instincts of the lower animals, as to devise ways whereby those habits and instincts, instead of being exerted to his injury, are brought into his service and made to work for his benefit. Therefore, do not let us, lords of creation, allow these vile field grubs to rob us of two or three acres of grass, without obliging them to give back to us an equivalent for it. Let us have the value of that grass returned to us in the increased size and thriftiness of our swine. I cannot but think these animals, confined upon a spot so over-stocked with grubs, would in a short time ferret out and devour every one of them, leaving the soil cleansed, mellowed, manured, and well prepared for being immediately laid down to grass again, or for receiving any rotation of crops for which the proprietor may deem the spot best adapted. It should be observed that when cold weather approaches, these worms sink themselves deep into the ground, so as to be beyond the reach of frost during the winter, and return back to near the surface again when spring returns; so that at this date there will probablo be none deeper than hogs are accustomed to root. It will be interesting to know how long a given number of swine will be occupied in cleansing an acre of ground containing from twelve to twenty of these grubs in every square foot. And I earnestly hope those who have lands which are devastated in the manner spoken of, will try the experiment which I have now proposed, and will make the result known to the public, whether it be successful or otherwise.

When these grubs have completed their growth, and come abroad in their perfect state, another opportunity is presented for destroying them and preventing their future increase. Every year, when the middle of May is approaching, cherry and plum trees should be inspected each evening, particularly our choicest varieties of these trees, to ascertain if the May-beetle is collecting in numbers upon them; and if they are, they should immediately be shaken off upon sheets spread beneath the trees, and emptied into bags or covered pails, and should be killed by immersing them in boiling water, or pouring this upon them; after which they may be fed to the swine and poultry. Many years ago, a writer in the New York *Evening Post* stated that trees could in this manner be entirely freed from these beetles in a very few evenings. Trees from which two pailsful were collected the first evening, furnished a much less number upon each succeeding night, until the fifth, when only two beetles could be found upon them.

Salem, N. Y. Asa Fitch.

A GLANCE AT VIRGINIA AGRICULTURE.

Messrs. Editors:—A recent visit to a portion of the tide-water country of Virginia, inclines me to write a few lines for your paper. At the North, we are apt to have incorrect ideas of the quality and profit of Southern agriculture, and we find it difficult to reconcile slave labor with that thorough development of the resources of tillage which we think we have in our own region. One fact is evident, both North and South, and that is, that the earth is, as a

general rule, very inadequately cultivated, and that the bounteous bosom of our common mother is made to yield far less than it should. Superficial and even ruinous cultivation are far too frequently seen, and hence lands "run out," lose their productiveness, are left to waste, and their occupants seek other virgin soil, where the same destructive experiment may be repeated.

A more frequent interchange of personal views, and more frequent observation of various sections of our country, by the residents of other portions, would serve to correct many errors, and show us that our preconceived ideas were baseless. A mere census return, which rates New York land many dollars an acre more than that of Virginia, may yet not show that New York tillage is therefore proportionately the more profitable. Labor and the price of living may be proportionately higher here, and thus the net returns of the investment be much diminished. The high price of land, is not always the symbol of prosperity or thrift.

It is undoubtedly a mystery to a Northern man, how the Southern farmer can exist and make money, with so many hands to support, and yet the Southerner does this, and, in multitudes of cases, without ever resorting to the sale of any portion of his laborers, as he might do where the "peculiar institution" exists.

In tide-water Virginia, the products are corn, wheat, oats and potatoes. Fifty bushels of corn to the acre, or twenty of wheat, are regarded as a good yield. The farms are large, often of one thousand acres, but more frequently of from three hundred to seven hundred acres. The farmers own from thirty to three hundred slaves—and a fair per centage of field hands is one to seven or eight, often not more than one in ten or twelve. There are farms on which may be found over fifty slaves yet too young to work, and as many more who have passed the age of active labor, and all these to be sustained by the labor of the few field hands I have named. The farmers have plenty of horses and mules of fine quality, and numbers of cattle of fair quality. Hogs are abundant, but small—one hundred and fifty pounds at killing time being the ideal of excellence for Virginia bacon.

Plows and hoes are hardly up to our Northern standard, but the first quality of reaping and mowing machines is used. The land is underlaid with deposits of marl, but the farmers find it cheaper to buy guano, and this they use freely. No where, is scientific agriculture more thoroughly practiced, so far as fertilizers are concerned. The negroes are comfortably housed, fed and clothed, and the whitewashed "quarters" are like the humble cottages of our suburbs. We see, occasionally, tumble-down and rickety buildings, but the hand of the slothful man curses towns and settlements everywhere. There is in tide-water Virginia, an appearance of thrift and prosperity which is calculated to surprise a Northern man who turns from the prejudiced observations of some books and newspapers, to look at life as it actually presents itself.

Land here is worth from $12 to $40 an acre. The latter price bringing a well cultivated place, with buildings in perfect order. Some land is cheaper, even, than the lowest price I have named, but it is worn-out land, unfavorably located, and with poor buildings, if, indeed, it has any at all. I am acquainted with one farm in the region referred to, which, eight years ago, cost about $4,200, and included over three hundred acres. It has in this time paid for itself, and sustained thirty slaves, of whom five were field hands. It is now in prime order, with good buildings and "quarters," and is valued at over $12,000. It has been a handsome source of revenue to its owner, who is justly proud of the results of a prudent management. I know another farm, in which the investment is $17,000, and which yields a revenue, yearly, over and above its expenses, of $10,000. In this case, the proprietor uses the labor of hired slaves, and of course does not have a host of unproductive young and old negroes to support. These two instances, out of many others, I have noted down, not as extreme cases, but as good examples.

Virginia has a milder climate than ours. Its rivers teem with fish and oysters. It is generally healthy. It is an agricultural State, emphatically, and it returns a handsome support to those who cultivate its soil lovingly and prudently. Its houses and furniture are plain, but its people are given to hospitality, and their tables groan under a profusion of good things. Virginians delight in showing up strangers, and not less in exhibiting to them the peculiarities of the system under which they live. It would require time to break in a Northern farmer to their way of doing things, and perhaps he might never succeed as well as they do, with the class of labor they employ. But some might learn lessons of patience and contentment, to say nothing of the effect that might be produced upon a too common, and really stupid, prejudice against "book-farming," as they style scientific agriculture.

The rewards of agriculture are rarely as large and tempting as those of other professions, but its failures are less disastrous and less numerous. The true policy, is a small farm and a careful tillage, which shall cause the willing earth to do its best, and which shall make many ears of corn to grow where only one is now produced. North and South, the evil of large and unmanagable farms is too common. Acres of land are to the cultivator like the Sybilline books, of which a portion was successively destroyed, till out of the original twelve only three remained, and for these the same price was asked as for the whole original number. More money is often made from fifty acres than from two hundred. Deep plowing and steady care are essential. P.

Western New York, July, 1857.

OBJECTS OF HOEING.

MESSRS. EDITORS:—The publication of my crude thoughts on the "Objects of Plowing," in the April number, encourages me to send you a few remarks on the use of another implement—one often in my hands, now-a-days. I mean *the hoe*—that universal soil-stirrer among all nations which till the ground.

"What are the objects of hoeing?" They are three, and may be stated as follows:

1. We hoe *to mellow the soil.*
2. We hoe *to destroy weeds.*
3. We hoe *to form hills.*

How shall we use the hoe to best secure these objects?

1. The cultivator, the horse-hoe and the like, are a pre-requisite to the hand-hoe in all field culture. Let them "do their perfect work" in mellowing and cleaning the soil. Then "take up the hoe"—but

first, look at what there is to be done. The soil in, and immediately around, the hill, remains unstirred. It is to be *mellowed*. Strike the corner or side of the hoe, well in, first on one side of the plants, and then the other, and draw it toward you, so as to loosen the soil without much displacement, at least two inches deep. Do this as often as is needed to thoroughly loosen all the soil, untouched by the cultivator or horse-hoe.

2. On good ground, planted and hoed in season, to *destroy the weeds* will be a secondary consideration—there will be so few to destroy. But when plentiful, first cut them up, scrape away the surface-earth which contains them, and in the course of the week *bury* them out of sight. Very weedy ground requires careful hoeing—such hoeing and culture as will *kill the weeds*, in one way or another.

3. The third use of the hoe—*to form hills* for plants—is fast getting obsolete or out of date. Potatoes only require hills—and these should be slight mounds only, not steep pyramids of earth. How does an unskilled workman undertake to hill potatoes? He strikes in his hoe so near the roots as nearly to dig them up, he chops and haggles at random, forming a botch in the end. A skillful hand, (myself, for instance!) first, with two strokes of the hoe, clears away the weeds; with two or four more, mellows the soil in the hill; and with about six more, forms a perfect hill, regular in shape and slightly dishing in the centre, to take a little extra share of the rain to the roots. It is done quickly, easily, and *philosophically*, or, with *a reason for every movement*.

The hoe—*par excellence*—is light and thin in the blade, and "*set right*" on a long, smooth, springy handle, with a sharp edge, well tempered, "too hard to batter, and too soft to break." The blade should not be too long, but nearly twice as wide as long, so that when we strike with the side, we make a narrow, deep cut—so convenient in *mellowing* the hills.

In conclusion, "The Objects of Hoeing" can only be accomplished by keeping these implements bright, and their handles shiney, by *constant usage* for at least six weeks after planting. *Corn grows by hoeing*—by agitation of the soil. Make the horse-hoe do all that it can—let the hand-hoe finish up the work. But my *Sorgho sucre* calls for *the hoe*, so I will lay down my pen, take that up, *and go at it*.

B. F.

APPLYING AND LEAVING MANURES UPON THE SURFACE.

Messrs. Editors:—I have been in the practice of applying manures free from noxious weeds, by spreading and leaving upon the surface, at any and all times of year when most convenient; but prefer to apply upon close-cropped grazing or meadow land, in the autumn, winter or early spring, as grass, when much grown, is partially and temporarily killed by the application.

When manures (of the ordinary quality and quantity) come in close contact with the soil, the grass readily penetrates and thickens upon them, the manure operating at once as a mulch, a fertilizer, and a retainer of ammonia, or other atmospheric elements, and forming a greatly increased and productive turf or sod, of unappreciated value to the succeeding crops, whether taken one or many years after the application.

In this way, farmers who choose may have the barn-yard mostly cleaned out before the busy season comes on, nor need there be any fear of dissipation of values, as the rains and dissolving snow will distribute the more soluble portions among the soil, and the growing grass will seize upon the substance with as much avidity as a hungry pig will upon clover, and the sun will evaporate nothing but pure water. As to the gases, are they not evolved from all manures when brought into a state of fermentation, and to a greater extent than when manures are in contact with the appropriating activities of living vegetation and with the soil?

I have long been in obscurity as to the natural processes which, as is claimed, take so much value from manures spread and left upon the surface, and have given limited suggestion to the practice recommended by your correspondent, John Johnston.—Nature, a someweat respectable and reproductive "institution," of long standing, and which, as proceeding from an all-wise and beneficent source, never makes a mistake, invariably spreads her manures in the autumn. She draws her nurslings under cover, and lays down her leaves and surplus grasses to protect them from the cold, and yield their substance to the next year's product; and mark how uniformly, in our climate, a blanket of snow is laid upon the earth before the advent of a cold snap.

I believe the recommendation of Mr. Johnston, that manures should be applied in the autumn, will be sustained by experience; and that on this subject the Doctors of Agriculture are wise beyond what is written.

John McVean.

Scottsville, N. Y.

CULTIVATION OF WINTER WHEAT.

Messrs. Editors:—The cultivation of wheat under different circumstances or in different localities, like various diseases incident to the human system under different circumstances, requires different treatment. He who assumes to write a specific routine, or prescription, for the cultivation of wheat upon the hard granite hills of New Hampshire, upon the deep alluvial prairies of Illinois, upon the cold, clayey hills of North-eastern Pennsylvania, upon the deep rich loam of Western New York, will find, in my opinion, to say the least of it, an "up hill" business, or rather, perhaps, they who attempt to grow wheat in all these localities from the same specific formula, will fail in some of them. I know nothing about the raising of wheat in New Hampshire, Illinois or New York, but I wish to speak of North-eastern Pennsylvania.

The soil here is not peculiarly adapted to the growing of wheat. It is wanting in lime, I suppose, and other ingredients that go to make up the elements of a good wheat soil. Though some good crops have been grown here, especially when the country was new, yet now, as our lands grow older, one of our most implacable enemies is a certain Mr. Frost, more familiarly known, perhaps, as "Jack Frost." For us, in most cases, to sow winter wheat on old ground, thoroughly summer fallowed and pulverized, would be equal to throwing the wheat away, and losing all trouble and expense of preparing the ground. And in order to avoid the action of the said Mr. Frost as much as possible, some of our farmers pursue a course something like the following:

Select a *good, dry, warm* and *rich* field, of two years old clover sod; invert it sometime between the middle of July and the middle of August, with or without the crop of clover, as you can afford, (better with, no doubt,) to the depth of from four to six inches—not very deep, unless the soil is deep and strong, because the cold subsoil will retard the starting and growth of the plants. This plowing can be done on odd and lowery days during haying time, when the weather is unpropitious to mow or gather in, and not too wet to work the ground. After the ground has been nicely and evenly turned, and lain till the surface has become dry and warm, put on a harrow and give it a thorough harrowing, and then, if you have it, draw thereon ten or twelve loads of thoroughly decomposed manure, or one hundred and fifty to two hundred pounds of guano, to the acre, and spread it evenly and harrow in well. This will supply food for the plant till it can support itself, and give it a good start. Do not allow the harrow teeth to cut in deep enough to disturb the sod.

As to the seed, procure only the most hardy and productive varieties, combined with good quality. If you raise your own seed, so much the better. To prepare seed, select from your growing wheat a part of the field where it will ripen early and well, (not prematurely, from a want of depth of soil or otherwise,) and where the plant, head and kernel will be fully developed; from this, clean out all rye, chess, cockle, or other vicious seeds, and let this plant stand a week longer than that you cut for family use, or at least until it *fully matures;* and when you thresh it, do it with that old-fashioned threshing machine, to wit, the *flail*—then you will have no cracked or broken seed. With a fanning mill, separate it from the chaff, clean the chaff from the floor, and prepare the mill for running the wheat through again; repeat this operation till you have reduced the bulk of the wheat one half, and separated all the smaller and shriveled seed, leaving nothing at the tail end of the mill but the largest, plumpest, healthiest and most vigorous kernels of wheat. Of this, sow about one and a half bushels to the acre—some prefer more, some less. With a light plow, plow it in with light furrows, to the depth of two or three inches; and I have known it cultivated in with a corn cultivator, with first-rate success. Drilling, perhaps, would be better, but we are unacquainted with that mode of seeding. If it should be plowed in, do it in that direction that will most readily conduct the water from the field; if harrowed, go over it afterwards with a good roller, and then, if there should be any hollows or spongy places where water would be likely to stand, cut some shallow furrows through them often enough to prevent any possibility of water being left standing. Sow from the 25th of August to the 5th of September.

The culture of rye is similar, only an older sod and more impoverished soil can be sown. An old pasture or meadow, with a crop of hay first taken off, will do. I have known an old pasture, probably of thirty years' standing, so treated with excellent success, and one, too, so flat that water on it did not know which way to *run*, but through the wetter part of the season *stood* upon the ground—that is, in the midlands and hollows. A good sod tends to keep it above the water, while it serves as a "backbone" against frost. Sow from the first to the middle of September.

Something after this manner we treat winter grain in this section, and I have no doubt the same method would be beneficial in other parts where the soil and obstacles to be overcome are the same.

Susquehanna, Pa. UNCLE SAM.

KEEPING SHEEP ON GOOD LAND.

MESSRS. EDITORS:—I have heard it said by many for several years past, say at least for fifteen, that sheep could not be kept profitably on our best lands, and I have heard the same in addresses by learned and fluent speakers. But I have always dissented from such doctrine. I have seen the beginning and ending of many undertakings to keep sheep on our most valuable lands, and believe I know why they did not make them profitable, and have long had a wish to publish my views on the subject, but they being so much at variance with the opinion of some of our most learned men, I felt a diffidence in giving them.

I never saw a farmer begin with a small flock of sheep, in this neighborhood, who was not surprised how much they paid him for their keeping; but whenever he increased them to hundreds, and still kept his former stock of cattle, then came the time that they would not pay. They were turned into the fields as soon as the snow was off the ground, to run around to get their living, and often they would almost eat the surface of the earth; consequently, they became very poor and overrun with ticks, and the ewes had no milk for their lambs, and, of course, few lambs were raised. They sheared light fleeces, which would not pay; for having been turned out six weeks before any grass began to grow, they ate off all the old wool, if there was any on them, and when the grass began to grow, they picked it up as fast as it appeared. Then they would be put on fallows, woodland and pasture, alternately, through the summer, and after hay was cut, put in the meadows to keep them alive, which will almost always ruin the next hay crop. They went in to winter poor, and of course, many would die during the next winter. The owner then concludes that sheep do not do well kept long on the same farm, and he will sell them for whatever he can get for them, and abandon sheep farming. Now, I do not here state only one case, but I have known a great many such cases during the last twenty years. I have also heard learned men say, that our low, rich land was not congenial to keeping sheep; they wanted high, hilly land. Now, Messrs. Editors, I never saw land *too low* to keep sheep, if dry; and the hills, *if wet*, will not answer for sheep.

The way to keep them profitably on good land, or any other land, is to keep them as *good* farmers keep their cattle. Give them *good, dry yards* and *sheds* for shelter in *winter*, with feed enough to keep them thriving—yes, *improving*—all winter, keeping them in the yards until there is a full bite of fresh grass, and give them *enough of it during summer and fall*, and I have no doubt that every farmer on the best, or worst farms, will find they will pay as well for what they consume as any stock he keeps. It was perfectly absurd for men to think they could begin and keep from one hundred to two hundred sheep over and above their usual stock, yet many, very many, undertook to do so some twenty to twenty-five years ago; hence, sheep would not pay on good land. Seven or eight sheep should have as much feed as a four year old steer, and with that they are a safer in-

westmeat than the steer, and in general will pay better; but so long as farmers expect to keep sheep in woods and fallows in summer, and pick around straw stacks in winter, they will not pay. The true way to winter sheep by wheat raisers, is to feed straw very plentifully for fodder, and give a bushel of corn, or its equivalent in other grain, to each sheep during the winter. In this way they will come through winter far better than when fed on ripe timothy hay, and at much less expense. And if he wishes them to pay still better, let him feed each sheep a bushel and a half of corn, or oil cake meal, and I can guarantee they will pay very well. Oats, peas or buckwheat will answer, but they will require about two bushels of oats to one of corn or oil-cake meal, and about one and a half bushels of buckwheat to one of corn. I know nothing that pays better for what they eat than sheep, and I should like to know what animal will pay for bad feeding. If farmers would only keep sheep as they ought to be kept, there would be no more talk about "sheep not paying on good land." *Land cannot be too good for sheep;* such is my opinion, and I have kept sheep on both *good* and *poor* land, for many years, and I can make more interest on my farm by keeping sheep, calling the land worth $100 per acre, than by keeping them on many of the hill farms that I am acquainted with in this State, calling these farms worth $15 an acre, and I question if any of them can be bought under $25 or $30 per acre. JOHN JOHNSTON.

Near Geneva, N. Y.

CATTLE DISEASE IN OHIO.

MESSRS EDITORS:—In consequence of the appearance of a severe and fatal disease among cattle in some part of Portage county (Ohio) the past winter, the Farmers' Association of Edinburgh appointed the undersigned a Committee to investigate the subject, and ascertain, if possible, the nature, cause and cure of this malady. The report of this Committee we herewith forward for publication in the *Genesee Farmer*, together with a resolution adopted by the Association at the close of an instructive discussion upon the adoption of the Report.

REPORT.

The disease is not caused by freezing, neither is it what has been called hoof-ail, foot-rot, or foula. Its symptoms seem to be a deadness of the end of the tail, extending upwards till in some cases the flesh separates from the bone and falls off. About the same time, there is a purple appearance just at the edge of the hair, above the hoof. It then commences swelling, becomes feverish, extending upward to the ancle, and in some instances causing a separation of the coffin-bone from the postern joint. The lameness is confined entirely to the hind feet. The blood is pale and thin, and in most cases the animal retains a good appetite till near the last. The cause we apprehend to be feeding on hay containing ergot (a parasitic fungus growing within the glumes of various grasses) in considerable quantities. We arrive at this conclusion, from the fact that the hay fed by one individual who had lost a large number of cows contained much of this article, and also that the farmer from whom he purchased the hay lost cattle from the same disease, and in both instances cattle fed on other hay were not affected. In every well-marked case of this disease, it has been ascertained that the hay on which the animals were fed contained the ergot. The hay in which the ergot was found the most, was the kind called the June, or Spear-grass, growing in old meadows where the soil is rich and the growth rank.

The severe frost on the 31st of May, 1856, is supposed by some to have been the cause of this disease in the grass, by destroying the vitality of the seed before it arrived at perfection; while by others it is attributed to the extreme warm growing weather in June causing an overflow of sap.

Although we consider the whole subject involved in much obscurity and uncertainty, and requiring further investigation, yet we are satisfied the best manner of treating the disease is immediate resort to restoratives, and a change of diet, whereby an increase of animal heat and vitality is obtained, at the same time making an application of suitable remedies to the affected parts, by cutting off the toes until they bleed, and blue vitriol moderately applied to the foot has in several instances been found beneficial. A free use of charcoal and salt in various ways is undoubtedly a good preventive; and a careful examination of the hay or grass on which stock is fed is indispensable—if ergot is found in hay, it may be removed by threshing or tramping.

Of the specific nature and properties of the ergot in hay, or whether they are identical with that of rye, we are not well informed. The immediate effects of the latter in large doses is well known, but it has no affinity to the ordinary known effects of vegetable poisons. What effect would be produced by its gradual and continual use, we are not in possession of sufficient information to warrant us in speaking positively; but we do suppose, after a careful examination, that it operates on the blood of the animal, and unless immediate remedies are applied it proves fatal.

P. BARRON, M. D.,
R. M. HART, Esq.,
J. Y. PEARSON,
JONAS BOND,
Committee.

The following resolution was unanimously adopted:

Resolved, (inasmuch as the evidence adduced is conclusive,) That ergot in hay is the cause of this disease. The Association cannot decide that it is the real cause of a poison being introduced into the system, owing to our inability to analyze this substance; therefore we desire to ask the editors of our agricultural papers for more information, and to obtain a chemical analysis of ergot.

Edinburgh, Portage Co., Ohio..

SOUND CORN.

MESSRS. EDITORS.—In looking over the last volume of the *Farmer*, my attention has been called to an article on this subject, from the pen of your correspondent, J. C. ADAMS; and, as I think he holds some mistaken views, it may not be out of place for me to give some ideas with regard to this subject, which is of importance to every farmer.

As to planting in rows, east and west, I believe Mr. A.'s reasoning is correct. But I think he is mistaken as to the best manner of securing corn and corn-stalks in autumn. My plan is something like this: Cut it up by the roots, before the heavy frosts set in; tie in small sheaves, with a straw band, above the ear; set enough of these together in a shock to stand sufficiently firm; then secure it with two or three bands, near the top. It may stand in this way until sufficiently dry to be husked. My reasons for this mode are, that the corn is without doubt sounder than when left on the hill; and it has been

proved, by actual experiment, that corn cut up by the roots and cured in shocks, is about four pounds per bushel heavier than the same variety, on the same kind of ground, left to ripen in the hill. The reason of this seems to be, that when cut up before it is killed by the frost, the sap then in the stalk goes to maturing the ear.

Mr. A.'s picture of a person seated upon a bundle of damp corn stalks, endeavoring to extricate the slippery, half-rotten ears from their mouldy coverings, is a picture of some slap-dash farmer, who leans his corn against the fence, or pole set up for that purpose, to avoid the trouble of shocking. When such a course is pursued, mouldy, half-rotten and slippery ears are all that common sense would look for. But try fairly the plan I have laid down, and when husking time comes you will find your corn sound and dry; and besides, you will have the thanks of your dumb animals for the excellent fodder.

Indiana Co., Pa. W. H. M.

A FARMER'S OPINION OF "AGRICULTURAL QUACKERY."

Messrs. Editors:—In order to derive the greatest benefits from agricultural pursuits, it is necessary that every farmer should contribute his "mite," in the way of *practical* experience, through the pages of some reliable agricultural journal. Let every tiller of the soil, of however limited an extent, write out his own observations and experience—not giving explosive theories, or "quackery," as you term it in your July number, in lieu of sound, practical experimenta. In this way, each writer, as well as reader, will be benefitted, as thought begets thought; each adding his suggestions to those already added, is the track over which all great improvements have been forced to pass before their principles have become fully developed. I would suggest that we may assist the great minds who are continually laboring to benefit the farmer by applying the various sciences to the cultivation and improvement of our different soils, by adding such ingredients as are found to be deficient.

We certainly have derived great benefits from the labors of many eminent chemists abroad, as well as from the efforts of great minds at home. Mechanics, also, bestow much benefit, by studying to improve labor-saving machinery. Still, we may arrive at greater perfection, by giving, through the Agricultural Press, our suggestions for improvements in the practical workings of the different agricultural implements. It is a fact that improvements in mechanical pursuits are disseminated with much more rapidity than any in connection with the farming interest; and why is it so? It may safely be said, it is owing, in a *great* measure, to "agricultural quackery," or, in other words, to promulgating theories that will not stand the test of experience. This must be remedied, by writing out plain, simple facts, as noticed on the spot from day to day. Perhaps it is owing to this same "quackery," that the deep prejudice against "book farming" is perpetuated, which prejudice drives many young aspirants for fame from the paternal roof, to seek room for their really promising intellect to develop. Thus are our best minds drawn from one of the noblest pursuits, in which they might shine and be benefactors to their race, and in which there is room, to some of the crowded professions, in which their hopes, in more cases than a mere majority, are totally wrecked—where they drag out their existence, nothing more than lesser lights, never realizing the independence and happiness they anticipated, when, deriding the low calling of a farmer, they entered the office of some half-successful lawyer, or a more bustling doctor. Still, agriculture may be made as honorable in its progress as any other pursuit—aye, it has already become a profession from which many *working farmers* are selected to fill honorable and responsible posts under government. The ignorance and prejudices formerly existing among farmers, as a class, are fast giving way before the lights which are brought to bear upon them by the batteries of science.

I have been lead to these thoughts by reading your truly excellent remarks on "Agricultural Quackery;" and it is that same quackery which operates on the agricultural community with such effect as to cause them to be suspicious of, and slow to adopt, the theories advanced by political farmers. It cannot be charged to a lack of intelligence on the part of the farmer, but rather to those who profess to have the facilities (which the laboring farmer has not) and disposition to prosecute the necessary researches, through the aid of science, and who, for selfish purposes, near election times, advance false, yet somewhat plausible ideas, as being the result of substantial experiments. As you continue to expose quackery in all its forms, where connected with agriculture, so may your corporosity, (circulation) like an alderman of the old school, continue to increase in rotundity, (number of subscribers,) until you can view yourself (the *Genesee Farmer*) with great complacency. D.

Gates, Monroe Co., N. Y.

REASONS WHY OUR AGRICULTURAL SOCIETIES SHOULD AND SHOULD NOT OFFER PREMIUMS FOR A PUBLIC EXHIBITION OF LADY EQUESTRIANISM?

[The following extracts are selected from some of the numerous articles we have received on the above subject.]—Eds.

Our Agricultural Societies should offer premiums for lady equestrianism, in order to induce young ladies to ride on horseback. The horse is a noble animal, and every lady in the country ought to be able to manage him, whether in the harness or saddle. Horseback riding is very conducive to health and good morals; it imparts the glow of health to the cheek, and gives vigor to the whole frame. If it were not for the premiums offered by our Agricultural Societies, many young ladies might not take pains to learn to ride, and consequently be deprived of that exercise, which, above all others, they need for the promotion of health. E. A. T.

Clarkstown, Rockland Co., N. Y.

The great object of Agricultural Fairs is to improve the farming interests of the country—to induce farmers to cultivate the soil in a better manner, to breed and rear better stock, to procure and use the best farm implements, and to influence the ladies to effort, to excel in domestic products and manufactures. By the exhibition of superior stock, superior farm products and the like, an interest is awakened in the

subject. Men thus have a practical demonstration of what can be effected. They see the results of well directed efforts—of labor conducted on scientific principles.

But what has lady equestrianism to do with improvement in farm management? When practiced at our Fairs, it is only a *parasite*, that destroys the interest designed to be awakened—a gangrenous excrescence, that eats out the vitality of the Fair. The attention is diverted from the real object of the day to one that is foreign, and deleterious to the interests designed to be promoted. Why, then, should it be encouraged? Crowds of people, both old and young, both male and female, will stand for hours around the ring to witness the performance, while other exhibitions, of substantial worth, hardly receive a passing glance. With a large share of the people, this is the *lion* of the day—the great object that attracts them there. Even before the day arrives, and during the exhibition, the question is often heard, "At what hour are the ladies to ride?" thus showing that, with many, this is the all-engrossing thought. The attention is thus diverted from the great object of the day, to one in no measure calculated to benefit the community. Even farmers themselves, instead of seeking for mutual improvement, by an interchange of opinion respecting the best methods of farm management in all its varied features, and in discussing the merits of the animals and articles exhibited, will suffer their attention to be engrossed by this exciting amusement, and thus the benefits to be derived from the Fair are in a measure lost. HUBERT.

THE object of our Fairs is to advance the science of the farmer; and to offer premiums for lady equestrianism, is a direct perversion of their object. Our opinions of what a *real lady* is, differ very much indeed; but *I do think* that no *true woman* would thus expose herself to be hooted at and cheered by a crowd of low, sensual men. And besides this, she does no more for the *advancement of agriculture* than she does for the advancement of *astronomy*, and has no more right to a premium at *such* places, than she would have before a company of scientific men, who had met for the investigation of matters relating to the above-named science. D. S.

Salem, Ohio.

TEACHING ANIMALS.

MESSRS. EDITORS:—The farmer is the "schoolmaster" of his herds. They are in the habit of doing daily as he allows them to do. They show training, or the want of it. They fly at his approach, or welcome him. They are gentle, or not, as he teaches them to be. They watch his feet, if he is *accustomed* to kicking them. They kick back, if he allows it.

Nothing adds to the market value of farm stock more materially, with so little cost, as the habits acquired in youth. The cow, the horse, the ox, and the dog, are valued much according to their habits or education—so is the man. The horse is, frequently, carefully trained—so is the dog; the ox and cow are as frequently "walloped into duty" as any way. I cannot see the propriety in offering premiums for well-trained speed horses, and not for plow or draught horses, or oxen and well trained cows. In real importance to the farmer, the latter are far preferable.

I would wish to urge upon the farmer, and the farmer's sons, the importance of careful, thorough training of all farm animals. Use tenderly and gently, at all ages, and you will see them manifest pleasure rather than fear at your presence. In teaching them to work, or to perform any duty, you need to be thorough, not harsh—kind, not cruel—and your forbearance will gain their labor, and you kindness their love. JNO. SANFIELD.

CLEAN MEADOWS.

MESSRS. EDITORS:—The importance of having a clean meadow, with a smooth and level bottom, is known to those who have mowed on both rough and smooth bottoms; they can speak from experience. I ask them if it is not better for their boys to pick up stones and roots on the meadow, when they are not at school, than to spend their time in idleness? If they have no boys of their own, is it not better to hire men or boys in the spring to clean the meadow, at the rate of from four to six shillings per day, than to pay a man ten or twelve shillings, in haying, to mow it, and have him several days longer about it than he would have been had it been smooth?

What is there that dampens one in their success, in their first attempt at mowing, more than to have their scythe strike a root, which, rolling over or fastening on the edge of the scythe, destroys the motion, when several lighter strokes are necessary to straighten it out before the mower can proceed, and frequently not until he has whetted his scythe anew? The heel of the scythe should run near the ground—therefore the necessity of having the meadow clean and free from loose stones and roots. Farmers, if you have a boy who is learning to mow, give him a good scythe and good grass to commence with, and then let him go ahead. W.

TO CLEAN COCKLE OUT OF WHEAT.

MESSRS. EDITORS:—Having written you about chess, I will say a few words about cockle, which I have found far more trouble in cleaning out of my wheat and land than chess. I sifted the cockle out by hand for some years when I first began farming here; but this I found a slow process, the seives here being so small. Afterwards I went to a fanning-mill maker, and ordered him to get a screen made for my fanning-mill, considerably coarser than those in use. After getting that, and by letting the wheat run slowly through the mill, and turning slowly, all the cockle ran through the screen into the box under the fanning-mill. In that way I got clear of cockle. True, a considerable quantity of small wheat ran through the coarse screen along with the cockle, but it was not lost, and I had made clean seed, far better to raise wheat, in place of the chess and cockle. I guarantee that the plan for cleaning both chess and cockle will answer. I also guarantee that neither will grow unless sown, either by man or beast. So long as my woods were not fenced, I saw lots of chess, cockle and pigeon weed growing there, from the droppings of my neighbors' cattle.

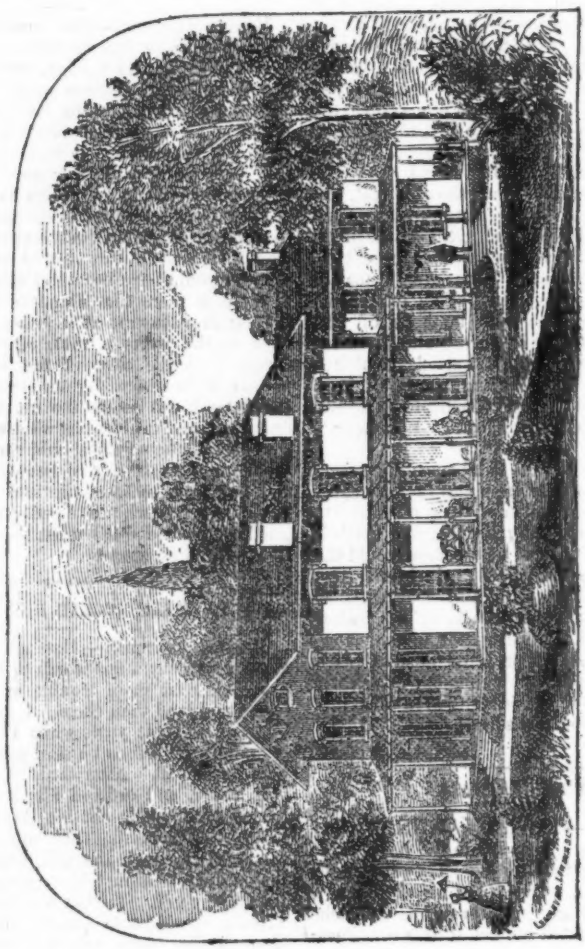
Near Geneva, N. Y. JOHN JOHNSTON.

IT is as important to take good care of animals, as it is to procure those which are good.

DESIGN FOR A BRICK FARM HOUSE.

The accompanying plan of a commodious farm house, I think may be worthy the attention of some of your readers. The exterior is plain, yet having a pleasant appearance. The absence of needless ornaments gives it a substantial look, which is always desirable in a *home*. The broad verandas afford a pleasant place for the weary farmer to sit and enjoy the cool evening breeeze, after the toils of the day are over. The interior arrangements will be found, I think, convenient and comfortable.

This house should be built of brick, in the bracketed mode. The window caps and sills should be of iron, or heavily wrought wood, and all the wood-work should be made in a substantial manner. The house should be situated in a moderately level country, facing the west and south. It should be pretty well surrounded with trees and shrubs, which will serve to give it a pleasant appearance. It is impossible to



BRICK FARM HOUSE.

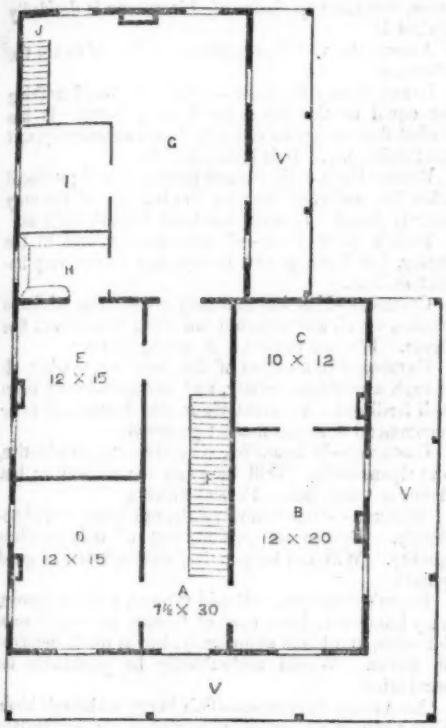
determine definitely the cost of erection, as there is so much difference in the price of labor and materials at different points. Here the cost would be from $1,500 to $2,000, according to the manner of building.

Description of the Ground Plan.—A, main hall; B, parlor; C, bed room; D, living room; E, dining room; F, principal stairway; G, kitchen; H, pantry; I, bedroom; J, back stairs. A wood-house should be erected back of the kitchen, but which is not shown in the plan.

The second story is arranged as follows: Over the parlor, (B,) is a bed room, 12 by 16 feet. Over C is a bed room, 10 by 12 feet. Between these rooms are two closets, 4 feet wide, one communicating with each room. Over D is a bed room, 12 feet square, and over E is another of the same size. Between these rooms are the stairs leading to the attic, and under these stairs are closets communicating with each room. Over the kitchen are two large bed rooms, and a store room.

Although in general so little is said of cellars, yet they are as important as any other part of the house. For a house like the above, I would arrange the cel-

lar in this manner: The inside entrance should be under the back, or kitchen stairway. There should also be a spacious entrance from the outside, or from the wood shed, leading into the cellar. Under the kitchen, there should be one large room for storing provisions, &c., for family use. Under D, I would have a milk room, 12 by 15 feet, with stone shelves,



GROUND PLAN.

tables, &c. Under E, should be a room of the same size, with wood shelves, for pickles and sweetmeats. The remainder of the cellar I would keep for the storage of apples, potatoes, roots, &c. If the house is intended to be heated with a furnace, I would build the furnace room under the front stairway, with the ash and coal room back of it. The cellar should be at least seven feet from floor to ceiling. Floors made of water lime and small gravel I think are better than common ground or boards. J. F. F.

Rochester, N. Y.

WHAT SHALL WE RAISE IN PLACE OF WHEAT?

Messrs. Editors:—The question has often been asked, of late, by our farmers, "What can we raise in place of wheat?" We answer, many things, that will pay you equally well. You have farmed it too long without adapting your crops to the market. You have, year after year, raised wheat, because each year there has been a market for it. It is because you have depended solely upon this crop, that its destruction spreads such panic among you. Year by year you saw the nearer approach of the midge, but still you kept on sowing wheat; and the consequence has been, that, when this insect did come, it found hundreds depending upon their wheat crop for the means with which to meet their pecuniary liabilities.

The question, "What can we raise?" is one of serious importance to the farmer; but still, if he is intelligent and wide-awake, he can easily answer it. We propose to name a few products, which the "signs of the times" indicate may be profitably raised, hoping thereby to call the attention of our farmers, not only to these, but to many others which may be sought out.

Raise Stock.—Any one, on looking at the present price of meats in New York, can but realize that such prices must afford immense profits to the stock raiser; and the prospect is that meats will be just as high, one year hence, as at the present time. Who, then, can doubt for a moment the profitableness of raising stock?

Raise Corn.—Corn is now selling readily at one dollar per bushel, and in some localities it has been sold, for seed, as high as one dollar and a half. This shows another source of profit to the farmer. But supposing the price is not as good another year as this, will it not pay you abundantly to raise it and fatten stock for market, thereby enriching your land with most valuable manure, which will enable you to raise larger crops, and, consequently, increase your income? The stalks will also furnish a most valuable fodder.

Raise Potatoes.—The present price of potatoes, renders this, also, a most profitable crop to raise for market; and, indeed, they would pay a handsome profit at a considerably lower figure than that at which they are now selling. Upon good ground, well manured and thoroughly cultivated, large crops may be raised, and crops which will most surely "pay."

Raise Roots—for, by so doing, you not only save much hay and other fodder, but your stock will do better upon a change of food, and you will not be as likely to be "short" of fodder, as were many of our farmers last spring, which caused rather a larger supply of hides in market than there would otherwise have been.

There are many other sources of profit that might be sought out in the present emergency, but of which we have not space to speak; and if our farmers will use them to their own advantage, we shall not suffer long from "hard times." R. D. Knowles.

Wilson, N. Y.

How to Bind the Wildest Horse for Shoeing, and the Wildest Cow for Milking.—The way to do it is simply this: Put around the animal, just back of the fore legs, a strong rope, or chain; into this twist a stick, so that at every turn the rope will be drawn tighter, until the animal will submit to being handled at your pleasure. The most unmanageable animals can be subdued in a few minutes in this manner. Jno. Sanfield.

"I say, Sambo, does you know what makes de corn grow so fast when you put de manure on it?" "No, I don't know, 'cept it make de ground stronger for de corn." "No—I just tell you; when de corn begins to smell de manure, it don't like de 'fumery, so it hurries out of de ground, so it can't breathe de bad air."

Horticultural Department.

ANNUAL NOTES ON STRAWBERRIES.

The recurrence of the strawberry season is now an event in the annual history of almost everybody. After a fast of some months from such luxuries, the universal nation seem to rage for strawberries, and the consumption, while good berries can be had for twelve or fifteen cents per quart, is enormous. Even the moderately rich buy berries daily in our market; and to all the *rich*, strawberries are an indispensable article of diet. While they last, Strawberry Parties, Strawberry Festivals and Fairs, are all the rage. For ourselves, we think the case quite justifies the enthusiasm, and hold that all information which helps on the good cause, and aids to make the enjoyment richer and more universal, should be brought out and placed in the hands of the public. Our contribution this year seems small; but every little is said to help, so we make a note of it.

June was a very wet month, and had an unfavorable effect upon the fertilizing process; consequently, pistillate varieties have, many of them, been inferior, and imperfect in form—but the varieties having perfect flowers were generally good. All, however, have been somewhat more acid than common, and less finely flavored than in a drier season. We have heard complaints from several market cultivators of the loss of considerable portions of their crops from this cause. It has been commonly supposed that wet weather was very favorable to a crop; but it has not proved so this time. We are inclined to the opinion, that only when a drouth and great heat occur just at the ripening off of the berries, do strawberries, under good management, in rows two and a half feet apart, require artificial aid by watering. We may secure more bulk, but it will be at a loss of quality more than enough to balance. Strawberries do not need diluting, but being well fed at the roots, mellow soil and good exposure to the sun will do the rest, in ordinary seasons.

The exhibition of the Genesee Valley Horticultural Society brought out some splendid dishes and collections of strawberries. Some of the foreign sorts shown were superior in size to any of our natives, and a few of those exhibited may be of value, but it is not generally supposed that they are equally profitable for cultivation. We shall notice some of them as we proceed. There were many of our old varieties shown, but they did not seem to change their relative positions much, in regard to size, quality, &c. We shall, therefore, omit notices of some, because nothing has transpired to show them better or worse than common.

We have before urged our objections to all varieties having imperfect or pistillate blossoms, and must again say, that as fast as equally good varieties having perfect flowers can be procured, the pistillate sorts should be discarded. We have long held on to one, (Burr's New Pine,) because of its superior flavor, but the experience of this season is decidedly against it.

Among the varieties requiring notice of us are the following:

Large Early Scarlet.—We have found nothing yet equal to this for a good, early berry. It has perfect flowers, grows strongly, bears abundantly, and most uniformly. It is indispensable.

Boston Pine.—Blossomed profusely, and produced a few fine and early berries; the balance of the crop entirely failed. It never has been *reliable* with us.

Burr's New Pine.—Plants looked well in the spring, but have grown feebly, and borne very imperfect fruit.

Cushing.—Has borne a very great crop of large berries, which sell well, but are quite deficient in fine flavor. Flowers perfect. A strong grower.

Crimson Cone.—One of the best for market, although a pistillate variety, and successful only when well fertilized. Its great vigor and handsome color recommend it to the market gardener.

Genesee.—Is beautiful, very vigorous, productive, and ripens early. Will be good for marketing, but flavor not first rate. Perfect flowers.

Walker.—Grows moderately, but bears very abundantly. Berries all perfect, but of only medium quality. Will not be popular, although it has good points.

Scott's Seedling.—Rapid grower, perfect flowers, very handsome, long, conical berries, of bright scarlet color, and bears abundantly, but is quite deficient in flavor. Would undoubtedly be profitable for marketing.

McAvoy's Superior.—This berry, although beautiful when in perfection, is worthless for cultivation, because a pistillate variety which it is exceedingly difficult to fertilize. It ought to be discarded.

Hovey's Seedling.—As usual, very large, very handsome, moderately productive, but not first-rate quality. A pistillate sort.

Hooker.—This is our pet, and, perhaps, we do not judge it fairly, but we have found it, of all our sorts, the most satisfactory. It is vigorous and productive, berries very large and of the finest quality, the flowers are perfect, and, in a word, it is adapted to all purposes, both for the amateur, and the gardener who wishes to sell fruit of good quality as well as good appearance.

Triomphe de Gand.—A most magnificent berry, when well grown. To the amateur, who wishes to secure great size and beauty, this will probably prove an acquisition. Vigorous grower, and hardy. Has perfect blossoms, (as all the foreign sorts have,) and bears moderate crops.

Trollope's Victoria.—Is also very large, and of fine quality, but has not been as productive with us as the above.

Le Reine.—Bore indifferently, and was not large.

Brighton Pine.—The first berries were good, and of good size, but all the rest failed. We do not see much to recommend it. Flowers perfect.

Moyamensing.—Bears well when fertilized, but cannot be highly recommended.

From the above varieties, a selection of five can be made which will comprehend the whole season and all the most valuable points for the amateur and gardener. For this locality, and our methods of cultivation, we prefer the following, but would also like to add one or two more, if space and convenience did not forbid. Our choice would be—

Large Early Scarlet—Earliest, and very sure bearer.

Hooker—Best quality, and fine bearer.

Triomphe de Gand—Handsome, and very large.

Hovey's Seedling— " " "

Crimson Cone—Vigorous, *late*, productive.

We would like to add—

Burr's New Pine—For superior flavor, of peculiar character.

Genesee—For early berry for marketing.

H. E. H.

Ammonia in Green Houses.—"A little dilute liquid ammonia, poured upon a hot plate in a green house, has a wonderful effect in developing flowers and leaves." —*Scientific American.*

May we be allowed to ask the *Scientific American*, if *liquid ammonia* has been actually tried, or if the statement is made on theoretical considerations? We are well aware that *carbonate* of ammonia has a good effect in green houses, but we have always queried whether *ammonia* itself would not be too caustic and scorch the leaves. Whether this is so or not, however, liquid ammonia is far too expensive to be used for this purpose. It would be far more economical to mix a little lime with sulphate or muriate of ammonia (sal. ammoniac), or still more so, with Peruvian guano. Such a mixture in a moist state, would give off large quantities of ammonia. Till the matter is settled by actual trial, however, we would advise our readers to act cautiously. The ammonia in the atmosphere is in the form of a carbonate, and if it is desirable to increase the quantity in the air of a green house, the best way is to scatter a little Peruvian guano on the floor, or to mix a little in a vessel with water. This will soon ferment and furnish a constant supply of *carbonate* ammonia.

HORTICULTURAL OPERATIONS FOR AUGUST.

It will be too late to expect any great results from the sowing of any very tender crop at this season of the year. But any quick-growing, moderately hardy vegetables may still be sown, such as radishes, lettuce, spinach, turnips, &c.

Radishes.—Let the radishes be sown on light, rich soil, and, while growing, copiously watered two or three times a week, or every evening in hot weather, in order that they may grow quickly and come to maturity in as little time as possible. They will then be as delicious and tender as at any other time of the year.

Lettuce may be sown any time during the month for a fall supply, or planted out between the rows of other vegetables that are soon to be cleared away. But lettuce is very impatient of transplantation in hot weather; therefore it will be necessary to water transplanted plants at such times. It is better to sow the seed in a bed of deep, rich soil, where it can remain, and thin the plants out to their proper distance.

Spinach may be sown between the rows of peas, early cabbage or dwarf beans, that are soon to be cleared away; and if the ground is not rich enough, manure can be wheeled on and spaded in between the rows after the other crops are cleared off.

Turnips.—The first week in August is the best time to sow rutabaga or Swede turnips for spring use. It requires a strong, moist soil to produce fine turnips. Sow in drills eighteen inches apart, and when the plants are up an inch high, thin them out to one foot apart in the row. Stir the ground frequently with the hoe.

White Turnips.—The first week of the month is also the best time to sow seed of the white varieties for early fall use, and the last week for a late supply. Sow in light, rich soil, in drills fifteen inches apart, and thin out to a foot apart in the drill. Early White Dutch is a good variety, and will be ready for use in six or seven weeks from the time of sowing.

Melons will now require some attention to pruning. If watermelons have three plants in a hill, two melons to a plant will be sufficient—that is, one melon upon a branch. Train them out at equal distances, diverging from the centre. Stop the branch three leaves above the fruit, and cut away all weak and useless branches which are not bearing. Muskmelons may be treated somewhat in the same way, only four plants may be left in a hill, and three melons upon a plant. Train out three main branches, and leave one melon upon each branch. Pinch the top out three leaves above the fruit, and all the small lateral branches produced upon the main branch should be kept cut back to one leaf, and all else cut away as soon as produced.

Cucumbers may be allowed to run, unless very fine fruit is wanted. Then the same treatment as recommended for muskmelons will answer, only that the branches will require pegging down to the ground, as they will root at every joint, and consequently produce finer fruit. They will require copious waterings every evening in hot, dry weather, but water would spoil the flavor of melons while ripening.

Strawberries.—This will be a good time to make new strawberry beds. Let the ground be trenched at least two spades deep, and the bottom of the trench loosened up with the pick-axe, and the stones thrown out. When the ground is selected, dig a trench three feet wide and two spades deep, and the whole width of the piece of ground to be planted. Let the earth be wheeled to the opposite end of the piece to fill in with at finishing. Then pick up the bottom of the trench as deep as the pick can be sent down, and put in a layer of any vegetable rubbish—as weeds, leaves, pea-straw or potato tops—and a small layer of manure. Then mark out another trench three feet wide, and throw the top spit of soil to the bottom of the open trench, then a layer of manure and a layer of soil, and so on until the second trench is as deep as the first, and the whole piece finished. Let the stones be picked out as the work is proceeded with, and the ground raked level. Allow it to settle a day or two; then, if dry weather, stretch a line the whole length of the piece, and draw a drill with a hoe, and give a good soaking of water in the drill. Make the next drill two feet from this, and water in the same way. When all is ready, take plants of this year's runners—the best that can

be had—and plant them a foot apart in the drill, and give another good watering, to settle the earth about their roots. Water a little every day in hot weather, until the plants have become well established. If this is well done, with good plants, and the beds protected in winter, a moderately good crop of fruit may be had the following season.

Varieties.—Large Early Scarlet, Hooker, Burr's New Pine, Hovey's Seedling, and Triomphe de Gand, are of the best varieties. The latter is a foreign variety, of excellent flavor, and produces the largest fruit we have ever seen. It is said to be very productive and perfectly hardy—but it requires further trial. Some splendid fruit of this variety was exhibited by Messrs. Ellwanger & Barry, at the Summer Exhibition of the Genesee Valley Horticultural Society.

Josiah Salter.

IN "MY NEW GARDEN."—No. 2.

That this is "a growing time" you may see, Mr. Editor, if you will walk again with me in my new garden. We have had frequent showers—both weeds and garden plants witness to that—but this stony, gravelly soil soon dries off, and yet retains a due share of moisture. Look first at those

Round Parsneps—Of which a square rod was planted May 9th. These were grown from plants, raised from seed imported from France, and distributed by the Patent Office. My first trial of them resulted favorably, except that they were grown too thick. I now have the rows eighteen inches apart, and shall thin to from four to eight inches in the row. I try them now, more for stock-feeding than for my own use; for a half bushel of parsneps would be ample allowance in my family for a year. I hope to give you a taste of them next spring.

Cabbages.—These are but just transplanted—some are yet very small—the large "late Dutch cabbage" seed, I got from you, started very slowly. Some other kinds are larger, and all are doing "as well as can be expected." Cabbages, like corn, "grow by hoeing *and not without.*" So every day or two, I stir the soil thoroughly around among them, as also among the

Cauliflowers.—The "Early Paris—only good one for this climate"—you sent me, grows finely. Though planted May 9th, they have made double the growth of the cabbage plants, and bear transplanting, with less check of growth. But here let me tell you about that pest of cabbage, cauliflower, onion and potatoe,

Cut Worms.—I never knew them so thick, as they are this season. I believe they have destroyed one-fifth of my cabbage plants, already, though I have carefully raked and dug the ground several times over and killed a great many of them. A couple of big toads are helping me, but they find too many worms to be very good hunters, I fancy. It may not generally be known that the insect parent is a moth, and there are several species varying slightly in size and character, but in the caterpillar or grub state, alike destructive to many plants. The wings of the moth lay horizontal when closed. They appear in July and August, in large numbers and deposit their eggs in the earth. These generally hatch in the fall, and descend into the ground, to pass the winter, and are ready in spring to commence their destructive work. Salt, it is said, will kill them, so it will the plants upon which they feed. We hunt them out and *crush* them; it is a certain preventive from further ravages. But it is decidedly unpleasant

MOTH OF THE CUT WORM.

to find your handsomest cauliflowers cut down, or your finest cabbage plant with its heart eat out, so that you must commence anew again.

Celeriac—Is not yet large enough to transplant. I hope to give you a good account of it in the fall.

Radishes.—How long will radish seed retain its vegetative power? My first sowing all failed to grow, and a part of my second—the seed was old, however, having probably been "imported" a dozen years ago. I think the scarlet turnip radish, one of the best kinds, and find no trouble in growing fine ones on my new soil—when they grow at all.

Lettuce.—"Blessed be the man who invented" Lettuce, I say, for I hold it a good thing, especially when other "greens" are not to be had. There is a great difference in varieties—that brown kind was sown last, but is double the size of the light green kind, sown a week earlier. It likes a rich soil, and to make such, I think one good thing is

Hen Manure—I mix this with ashes and fine, dry chip dust from the wood shed, and reduce it to powder. It is capital for *starting ahead* cabbages, onions, peas, etc., and potatoes and corn immediately acknowledge its influence. Perhaps it will help them out of the way of their insect enemies, if it does not repel the same. But I must not lead you by too long a route through the New Garden of

A Country Invalid.

Maple Hill, June 23, 1857.

SHADE TREES.

Messrs. Editors:—The July number of the *Farmer* contains a short article on "Six good Shade Trees," which suggests a few remarks upon the subject of planting ornamental trees and the care of them, which, I have thought, might be worth recording for the benefit of your readers.

Your remark that "it is difficult to answer the inquiry with any degree of satisfaction," is emphatically true: for we find upon going the rounds of our hardy forest trees, that there is not one of them but under some circumstances will fill a niche in the great field of planting, better than any other individual. The various peculiarities of different trees adapt themselves to the varying situations and surroundings of the place where it is desirable to locate them; and the very air and manner of one quite unfits it for planting where another will answer admirably.

The graceful and sweeping forms of elms and birches, are beautiful in spacious and elegant lawns, or ample pastures, whilst confined upon a seven by nine front of a city lot, where nothing larger than a shrubly grower should be tolerated, their lean and leggy appearance soon justifies their removal in disgust. *Soil* and *exposure*, have also a very great in-

fluence upon the beautiful developement of forest trees, and care must be taken to plant only upon soils adapted to the tree planted. Deep alluvial soils develop the elm to its greatest perfection, while the hard maple will crown the rough hillside with sweet and dense shade.

Some varieties of the oak, enjoy a sandy and exposed situation, while other species are not to be persuaded to grow there, but will flourish with great beauty upon a moist bottom. These peculiarities of species and varieties, have been very little dwelt upon by writers, and, in fact, are scarcely known well enough by any person to justify a very extended list of sorts adapted to peculiar localities; but I am persuaded that attention to the subject by planters, will develop important facts; and a careful exercise of taste in the selection of trees well adapted to the place they occupy, will make a great difference in the appearance of our grounds, and in the satisfaction with which the planter views his work of ten years ago.

The difficulty of removing some trees with success, is greatly felt by some, and few men can be found who can say that they have successfully transplanted the oak, the walnut and the chestnut, from their native woods. This difficulty is partially overcome by the nurserymen, who remove them when very young, and sell small trees which can be removed safely. But in spite of these improvements, the above mentioned trees will always be discarded by many planters, because they cannot readily be transplanted.

The man who plants trees for ornament, should carefully study not only the peculiarities of the species, and the variety he is to plant, but also the peculiarities of the *individual* tree.

It is well known to about all persons, that the trees they plant are raised from a seed. Now the seedling trees, although alike in their family appearance, differ greatly in size, thriftiness, size of foliage, form and arrangement of branches, density or openness of the head, &c. Some are upright, some spreading, others drooping, and all coming under the head of elm, or maple, or ash, &c. It is not enough to secure the variety; you must get a handsome tree of the kind, to have the best success.

The above remarks apply with equal and even greater force to evergreens, which vary so much in form and color, as to pass all the way from extreme beauty to utter deformity, in the same patch of seedling trees of one species and variety.

Ornamental trees are not many of them budded or grafted in the nurseries, except to perpetuate some very desirable and peculiar individual, as, for instance, the weeping ash, weeping mountain ash, &c., therefore, care should be exercised to select maples, elms, &c., with reference to their appearance. Lindens are uniform in appearance, becaused raised from layers, and the horsechestnut, although raised from seed, seldom departs widely from a dense and globular form.

There is a great evil under the sun in the *care* of ornamental trees, which I must notice.

Trees are planted and grow; at first the desire to secure shade and relieve the bare appearance of his grounds, induces the owner to plant thickly; by degrees the trees become larger, and, perhaps, encroach upon each other slightly, but the possessor of the shade, walks beneath, and congratulates himself. If any branches are in the way, he trims them off, the lower branches become feeble, by reason of shade and die off; these are removed successively, until at last the man wakes up to the fact that he has a good many trees on a small lot, but not a good looking one amongst them. The real object in planting, namely, satisfaction in the beauty and usefulness of the tree, is entirely lost. Nothing but timely thinning out of ornamental trees, so that they each shall have full room to develop their forms upon all sides, will secure the plantation from ruin.

How often do we see this lamentable lack of taste and judgment, in our streets and front lots of good dwellings. There is not this day one tree in twenty, upon our best avenues, and in what are esteemed fine places, but is injured before it has ten years growth, by crowding upon some other tree or building. In this city, so famed for rural improvements and shady streets, what we need most, is a judicious *cutting down* of shade trees far more than further planting. If some man, with the pen of a Downing, would write *down* a multitude of trees which writers have succeeded in getting planted, the benefit to taste and comfort would be immense. Shade is good to a certain extent, but the damp, dark and mouldy precints of some of our rural residences, are an offence to good taste, good health, and the spirit of improvement which ornamental planting should always promote.

H. E. H.

SUMMER AND AUTUMN PLANTING.

Messrs. Editors:—The months of August and September are the preferable periods in the State of New York, and in the States to the north of it, for transplating the following articles, and the months of September and October for the States adjoining on the south, as far as the Potomac, and the months of October and November for the more southern States.

Strawberries.—These, if planted at periods above stated, will produce a fair crop the ensuing summer. They should be planted in beds of three feet wide, with four rows of plants lengthwise, and at a foot each way. This width will admit of all the fruit being gathered from the sides. A path of about fifteen inches wide should be left between the beds.

Rhubarb, Asparagus, Horse-Radish, Sea Kale, Globe Artichoke, and Patience Dock, the latter the best of early greens, and very hardy and permanent. All these will, when planted thus early, become well rooted and established before winter. They should have frequent waterings during the first two weeks after planting.

Bulbous and Tuberous Flowers of all the hardy species, such as the different varieties of Hyacinths, Tulips, Lilies of all kinds, except the Speciosum varieties, Crown Imperials, Fritillaries, Crocus, Single and Double Narcissus, Polyanthus Narcissus, Jonquils, Gladiolus Communis, and other hardy varieties, Snowdrop, Snowflake, Ornithogalum, Colchicum, Squills, Bulbous Iris, of different kinds, Allium, Amaryllis aurea, Arum, Dens Canis, Calochortus, Ranunculus, Anemone, Bulbocodium vernum, Convallaria, Trillium, Uvularia, Cypripedium, Yellow Aconite, and many other species, and all the magnificent varieties of Herbaceous and Shrubbery Pæonies. All these splendid Flowering plants, when planted thus early, will become more vigorous, increase more freely, and bloom with much greater vigor. It is to be understood, that before planting

any of the preceding, the ground should be well plowed or dug, and plentifully manured for the Herbaceous, and moderately so for the Bulbous Flowers. — FRUIT AND ORNAMENTAL TREES, SHRUBBERY AND ROSES cannot be safely transplanted in this latitude until the 1st of October, and those intended for the South should not be forwarded until the 1st of November, at which time vegetation will have become sufficiently dormant for their safe removal. To the Western States inland, they may be safely forwarded the beginning of October. WM. R. PRINCE.

Flushing, N. Y.

CELERIAC OR TURNIP-ROOTED CELERY.

SEEING this garden vegetable advertised as "unique and fine," in the *Farmer*, I procured a package of seed, and am now growing the same. Perhaps some directions for its culture may be of service to your readers—it was some time before I found any thing relative to its growth and uses. From the *Gardner's Text-Book*, I compile the following:

CELERIAC—*Apium rapaceum.*—Sow in drills at different times during the spring months, so as to obtain a succession of crops. Water in dry weather, as the seed germinates slowly. Keep the soil clean and mellow—when the plants are six inches high, remove to their final quarters. This should be a mellow, rich soil, where they may be planted sixteen inches apart, each way. Water freely in dry weather, increasing the quantity with the growth of the roots. When nearly full grown, earth up the bulbs four or five inches—in about a month they will be sufficiently blanched for use. The roots can be preserved in sand during the winter.

FOR USE.—The following are the modes of preparation:—Boil until tender, cut in thin slices, and put in soup, or meat pies. Or after being scraped and sliced, they may be boiled very tender and then stewed five minutes in just milk enough to cover them; after which butter and salt to the taste.

Five weeks since my seed were sown—cauliflowers are large enough to transplant, the celeriac is just getting the third leaf, and is half an inch high. When will they be fit for transplanting? B. F.

CULTIVATING THE EGG PLANT.

MESSRS. EDITORS:—In answer to D. L., of Calidonia, N. Y., on the cultivation and preparation of the egg plant, I have cultivated it for a number of years successfully. I sow the seed in a hot-bed, about the first of March, and as soon as the second leaves appear, I pot them off into half-pint pots, putting three plants in a pot, and plunge the pots in a good hot-bed, up to the rim, and let them remain till the plants are four or five inches high. I then put them in pint pots, putting one plant in each pot and plunge them in the hot-bed, and let them remain to the middle of May, giving them plenty of air in fine weather; and from that to the first of June, I keep hardening them by keeping the glasses off night and day, in fine weather. About the first of June, I make holes two and one half feet apart, and put a good shovel full of well rotted manure in each hole, mixing it well with the earth taken out, and put the plants into it, giving them a little water before filling in the earth. If the weather continues dry, I water them; and about three weeks after planting out, I remove the earth round them (but not so as to expose the roots), and sprinkle a little guano round them, and give them a good watering, and draw the earth round them. They require little more, except to keep clean and water occasionally.

There are several ways of cooking the eggs. The best method I know of is, to slice them about a quarter of an inch, or three eights thick; peel off the rind; shake a little fine salt over them, and edge them up half an hour to drain off. Dredge them with fine flour, and fry in butter or lard to brown, and eat while warm. JOSEPH CALDWELL.

Troy, N. Y., June 1857.

THE CULTIVATION OF FLOWERS.

MESSRS. EDITORS:—Among men we find a great diversity of opinion respecting the beauties of nature, and consequently we see a great diversity in their feelings and practice. By some, they are admired; by others, despised. The man who makes gold his idol, esteems of little worth everything that does not contribute to its acquisition. A beautiful landscape awakens no emotion in his bosom. The tasteful cottage, ornamented with walks, and flowers, and shrubbery, hardly secures a passing glance; if noticed, it is only to condemn the practice. He considers the cultivation of flowers beneath his dignity, and the time thus spent worse than wasted.

But such an individual sadly misjudges in relation to the subject. The taste that leads a person to admire flowers, and to delight in their cultivation—that leads him in this way to adorn his home, and render it pleasant—is fraught with good rather than evil. It gives rise to actions and states of mind that not only serve to mould his present and future condition, but that silently tell on the welfare of community. As the mind acts on everything around it, so a reflex influence is exerted upon it from objects with which it is familiar; and these objects tend to bring it into sympathy with themselves—they leave upon it their own impress.

Where all is deformity and disorder within and without a dwelling, no wonder if we see character and actions corresponding—no wonder if we hear the profane oath, the vulgar jeer, and witness manners that are coarse and rude. In the absence of all that is chaste and beautiful, we must expect this. But where taste and beauty are manifest—where the honeysuckle, the climbing rose and the jessamine are gracefully trained over the cottage, and the walls are adorned with flowers of varied hue—we may look for the opposite. The beautiful will impart its impress, as well as the rude; and under its mild influence, what is coarse and vulgar will be held in check, and the delicate and refined be invigorated. You may augur the character of the inmates of a house by the scenery around. Where neatness, order and taste reign without, you may expect refinement and intelligence within; even the child that meets you will exhibit a character moulded by the influences around him; and the stranger may expect civility and a hospitable welcome. Place the child unaccustomed to admire the beauties of nature, but rather to despise them, in the family where intelligence is cultivated, and each one is taught to admire what is lovely and beautiful, and what restraint does he feel, what a restlessness does he exhibit. Gladly he breaks away from the influence, to associate with the vulgar

and rude, and to engage in pursuits and pleasures fit only for the brute. While one accustomed to the opposite course, moves with ease surrounded by such objects; the relish of his soul has been formed to find enjoyment there; and he exhibits a sensibility, a refinement of manner, not found in those of an opposite character. And the mind thus conversant with the beauties of nature, will be better prepared to relish moral beauty. While it looks through nature up to nature's GOD, conscience will recognise in virtue that which should command esteem. And the mind will be better prepared to derive enjoyment from all the works of GOD.

The worldling may complain that the time spent in cultivating flowers is wasted, and that it fosters idleness, and leads to the neglect of more important business. But this is false; a cultivated taste is more generally the ally of industry. Seldom do you find the tenants of a cottage tastefully adorned with shades, and flowers, and evergreens, among the idle, lounging around taverns or gambling saloons, or the inmates of the poor-house. The man of taste employs his leisure moments in these pursuits; while the fault-finder spends his in sleep, in idleness, or in slandering his neighbor. And thus, while his business thrives, his cottage and garden assume an air of neatness and comfort; and his children, instead of being left to patrol the streets in search of company or mischief, are taught to find enjoyment amid the beauties with which they are surrounded, and to engage in the active labor of adorning their homes. The trees and flowers cultivated with their hands, become, as it were, the companions of their childhood; and an attachment is thus formed for home, that holds in check the restless, roving disposition often manifest in those brought up without such influences or restraints. Habits of industry are thus cultivated, that are the precursors of success in future. And the influence thus exerted will spread, and become, as it were, contagious. As inanimate objects act upon the mind, so one mind will act upon another. The influence will extend from one cottage to another, and each will vie with others in their efforts to remove deformities and cultivate the beautiful. And who will say that society will not be rendered happier?

Children are generally fond of flowers, and in the forming period of life it needs but little effort to give a right direction, in this respect, to their feelings. The exertions of the parent seem only seconding nature in her struggles for development. But, alas! how many opening germs are crushed by the thoughtless and unfeeling parent! The love of gain having effaced from his mind the love of the beautiful, and blunted the finer feelings of his soul, he would fain destroy the same in his offspring. He thus not only robs them of their inherent right—a love for the beauties of nature—but he robs society of the influence they might exert in cultivating what is attractive and beautiful. Instead of training them up to become the benefactors of mankind, he would fain wrap them up in selfishness, and inculcate the feeling that the acquisition of wealth is the great end of man's existence. But such is not the part of wisdom. Among other preventives of idleness, vice, and profligate manners, let the parent instil into the mind of his child a love of the beautiful and sublime. While he trains him up to industrious habits, let him teach him, both by precept and example, to cultivate those little adornments that render home attractive. Flowers are the alphabet of nature; from them we may read the glory of the Creator of all things—the wisdom that planned and formed the universe. While their influence tends to soften and refine the feelings, they point us upward to their great original. Who, then, will not love flowers, and learn to admire their beauty? Who will not adorn his cottage, his garden, and his yard with these gems, and thus set an example for others to imitate? HUBERT.

APPLE TREE CATERPILLARS.

MESSRS. EDITORS:—I have noticed the apple tree worm as being vastly more numerous this season than usual, in this vicinity; and I also notice, at this time, there are hundreds of them attached to the underside of rails on the fences near the orchards; they being dead, hanging about half the length loosely, while the other half (the posterior half,) are clinging with considerable tenacity. They are full grown, and their skin is apparently empty, or nearly so. I call your attention to this phenomenon for the purpose of making the inquiry, is it generally so, and what is the cause? Has this circumstance been noticed previous to this year, or is it confined wholly to this immediate vicinity? D.

Gates, N. N.

GARDENING AT THE NORTH POLE.

WHEN the late Sir E. PARRY was wintering in the Arctic circle during 1821, scurvy, the great enemy of the polar voyager, was kept at a distance by the use of antiscorbutics, liberally supplied to the expedition. To these was added a regular growth of mustard and cress, in boxes filled with mould, which, owing to the superior warmth of the ships, was now carried on a larger scale than before. An amusing incident is connected with the preservation, during the voyage out, of the mould in which these vegetables were grown. While the ships were detained at Kirkwall, a boat came off to the "Fury" with some sackfuls of earth, which the ship's carpenter (an Aberdeen man, who had formerly belonged to the merchant service) was ordered to stow away below. At this he ventured somewhat to grumble, and to question the utility of the article in question. "Never mind!" says his mate, JOHN P——, from whom the account comes, "never mind! Depend on it the Captain has something in his head, and it 'll be all right!" The obnoxious sacks were, accordingly, stowed away, but, during the voyage across the Atlantic, they proved too much for the carpenter's patience, and, at length, he ordered P—— to throw the lumber overboard, as a mere fancy on the part of the Captain, no longer remembered. P—— shook his head, but his superior was determined, and away went the bags—not, however, into the sea, but, at all events, out of sight. Days and months passed, and the affair was forgotten. Winter Island was reached, and the ships were frozen in. One day an order was given to the carpenter to provide some long, shallow boxes. This done,—"Now, then, my man," says the Captain, "for those sacks of earth!" Down comes the unfortunate carpenter to his mate, in a state of ludicrous perplexity. "Eh! P——, but what will we do, man! here's the skipper singing out for the sacks we heaved overboard!" "We, indeed!" says P——, "but never mind, it 's all right; they never went overboard at all!" and, doubtless, many of his messmates had cause, at Winter Island, to be grateful to him that it *was* all right.—*Memoirs of Sir W. E. Parry.*

Ladies' Department.

LADIES SHOULD DO THEIR OWN GARDENING.

Messrs. Editors:—I hold that all amateur florists should be their own gardeners, unless they are able to keep a professional man constantly in their employ; for what is the use of having help to do that which we can do ourselves. I cannot send any one into my yard to work in the spring, unless I am with him to keep his spade or fork out of the bulbs or perennials that have not appeared above ground; and while I am watching him, I might do the work myself. "What!" says one, "do you spade?" I certainly do, and, moreover, I think I can do the work to suit myself quite as well as Pat or Jimmy, and am not ashamed to be caught in the act by any one. I have watched some men when they were spading, who were so afraid of their strength, that, with one foot on the spade and the other on the ground, they would bob about something as a frog might be expected to do under like circumstances.

Here something must be said relative to the outfit for gardening. Mrs. Loudon says "a lady should provide herself with clogs, or a tramp," which is described as a plate of iron, fastened under the right foot by means of a strap. All the clogs I find necessary, is a pair of stout, thick-soled laced boots, (and if the ground is wet a pair of rubbers over them,) a pair of thick gloves, and the other dress according to the weather. A few tools will be wanted, such as a trowel, a small garden rake, a pair of garden shears, different kinds of hoes, and a hand syringe, for the insects.

Trusting others to work among your flowers, reminds me of an incident related to me by an amateur friend a few years since. She was unwell, and thought it not prudent to go out, and it became necessary that the gladiolus bulbs should be planted; so she described the place where they must be planted to her husband, and he performed the work as well as she could have done it herself, and was highly gratified with his success. Shortly after, there was another kind that had sprouted in the house, which required planting out. She told him to plant them in any spot where there was nothing growing. It so happened that the first bulbs planted had not shown themselves, and, forgetting his first efforts, he planted the others above them! The mistake was not discovered in time to remove them, and they presented a beautiful illustration of the "mixed system" of growing flowers. Amateur.

A RESIDENCE IN THE COUNTRY OR CITY.

"Is a residence in the country or city most conducive to high mental culture, beauty of person, health, happiness and usefulness?"

In the economy of the human system, certain conditions are requisite to the proper exercise and development of each and every power of the body or the mind. A chief condition, is health. Racked with disease and emaciated in frame, humanity loses much of its beauty of person, and, instead of being useful, man becomes a burden to himself and to those around him. His happiness is gone, and the vigor of his mind decays, or, at least, his languid frame will not sustain him in the acquisition of high mental culture. If these assumptions be admitted, the question resolves itself into the habitation most conducive to *health*. Our health depends upon a variety of circumstances, among which are pure air, proper exercise, proper food, cleanliness of person, and a happy, pleasant frame of mind—*all* of which are more easily and naturally attainable in a country than in a city life: air, unmixed with the effluvia of a dense population—exercise, in which every muscle is brought into requisition—food, fresh and untainted, from the virgin earth—the rippling brook inviting to cleanliness, and the natural scenery wooing us to cheerfulness and happiness. In our country home, the ever-varying scene is suggestive of thought—monotony is forever excluded. "The rolling year" brings with it one long, unbroken spell of enchantment. The icy crystals, wrought into mosaics in the leafless tree, reflecting in the sun a thousand rays—the joyous notes of spring—the waving grain—the ripening fruits—the "sear and yellow leaf"—each and all impart a charm, healthful and invigorating, to our moral, intellectual and physical nature. The poetry of nature is written on every flower, and every grove is vocal with its melody. The crystal spring, the murmuring insect, the chirping bird, and the air fragrant with the odor of flowers, all contribute to make a *country* residence the home of health, happiness, contentment and peace. S. A. W.

Meadville, Pa.

THE FARM HOUSE.

Who does not love the farm house? I do not mean its *shadow*, but the real farm house, with long dairy, filled with delicious butter and cheese; its large kitchen, where, over the "great cook-stove" the rosy-cheeked lasses are at work, and passing to and from this to the great dining-table, upon which is spread all that heart could wish, selected from the produce of the farm; and beyond this, the spacious "sitting-room," (leaving out the dainty parlor,) where the family so often assemble, and the children listen to words of instruction from the lips of their reverend parents. Here is the cradle of Liberty and Independence. Here are hearts that breathe free air, and will make brave patriots in the struggle for their entire Freedom. It is true, they must be educated; but who is better prepared to do it than the farmer? Who more independent? All that he desires, he can obtain directly, or indirectly, from his farm.

Ye daughters, nursed within the walls of the farm house, envy not the city belle. God has blessed you with privileges which she can never enjoy. Look well to your duties; make the farm house a pleasant home for all those connected with it. A. E. F.

Girard, Pa.

AN EXCELLENT WAY TO PREPARE GREEN CORN FOR WINTER USE.

When the corn is sufficiently advanced for cooking, boil on the cob, in the same manner as it is generally prepared for table use. When it is done, cut it from the cob carefully, spread it on a cloth, and put it in the sun to dry. When it is wanted for use, wash it, and put it in sufficient water, slightly salted, to boil for an hour. Then add a little new milk and butter, and it is ready for the table. It can also be cooked with beans. O. L. Bass.

Milford, Ind.

ORIGINAL DOMESTIC RECEIPTS.

To Preserve Large Cucumbers.—Take large and freshly-gathered cucumbers. Split them down, and take out all the seeds. Lay them in salt and water that will bear an egg, three days. Set them on a fire with cold water, and a small lump of alum, and boil them a few minutes, or till tender. Drain them, and pour on them a thin syrup. Let them lie two days. Boil the syrup again, and put it over the cucumbers; repeat it twice more. Then have ready some fresh clarified sugar, boiled to a blow. Put in the cucumbers, simmer it five minutes, and set it by till next day. Then boil the syrup and cucumbers again, and set them in glasses for use.

To Preserve Small Cucumbers.—Weigh equal portions of small green cucumbers and of fine loaf sugar. Rub the cucumbers with a cloth, scald them in hot water, and put them into the syrup, with some white ginger and the peel of a lemon. Boil them gently for ten minutes. The following day just let them boil, and repeat this three time, and the last, boil them till tender and clear.

To Preserve Damsons.—To every pound of plums, allow three-quarters of a pound of pounded loaf sugar. Put into jars, alternately, a layer of damsons and one of sugar. Tie them over with bladder or strong paper, and put them into an oven after the bread is withdrawn, and let them remain till the oven is cold. The following day strain off the syrup, and boil it till thick. When cold, put the damsons, one by one, into small jars, and pour over them the syrup, which must cover them. Tie them over with wet bladder.

To Preserve Damsons—*Another Way.*—Prick them with a needle, and boil them with sugar, the same proportion as in the above receipt, till the syrup will jelly. Carefully take off all the scum.

To Preserve Green Gages.—Put the plums into boiling water, pare off the skin, and divide them. Take an equal quantity of pounded loaf sugar, and strew half of it over the fruit. Let it remain some hours, and, with the remainder of the sugar, put it into a preserving pan. Boil till the plums look quite clear, take off the scum as it rises, and, a few minutes before taking them off the fire, add the kernels.

To Preserve Apples.—Pare, core and quarter six pounds of good, hard baking apples. Finely pound four pounds of loaf sugar, and put a layer of each, alternately, with half a pound of the best white ginger, into a jar. Infuse, for half that time, in a little boiling water, half a pound of bruised white ginger. Strain, and boil the liquor with the apples till they look clear, and the syrup rich and thick, which may be in about an hour. Take off the scum as it rises. When to be eaten, pick out the whole ginger.

To Preserve Apples—*Another Way.*—Weigh equal quantities of good brown sugar and of apples. Peel, core, and mince them small. Boil the sugar, allowing to every three pounds a pint of water. Skim it well, and boil it pretty thick. Then add the apples, the grated peel of one or two lemons, and two or three pieces of white ginger. Boil till the apples fall, and look clear and yellow. Apples preserved in this way will keep for years.

To Preserve Pears.—Pare the fruit, and put it into a kettle with a little water, and boil. When quite soft, take the same quantity of loaf sugar and melt it into a syrup, taking care not to have it boil. Put the fruit into the syrup, and set away in jars. When preserved in this way, they retain their natural flavor and color.

Pumpkin Batter.—Wash the pumpkins clean, take out the seeds, and scrape the inside out with a strong iron spoon. Boil till soft, and rub it through a coarse seive. When strained, put into a kettle and boil slowly all day, stirring it often. Put in a large handful of salt. When nearly done, add a pint of molasses, or a pound of brown sugar, to each gallon of pumpkin. Before it is quite done, add allspice, cinnamon, ginger and nutmeg, one or all, as you may fancy. Put it into jars, when done—large ones are best. Tie it up tight, and it will keep until April or May, in a cold place, if you scald it when spring comes on. It is a good sauce for table use, and is always ready for pies, with the usual addition of eggs and milk. It is much less trouble, and far better, than "*dried pumpkin.*"

To Bake Apples.—Gouge out the eyes, and fill them with sugar. Set the apples in a pie plate, pour in a tea-cupful of water, and bake. Eat with cream, and the juice found in the dish when done.

To Remove New Fruit Stains.—Hold the cloth tightly over some vessel, and pour boiling water through it, and they will soon disappear.

Delicate Cake.—Add to the whites of sixteen eggs, beaten to a a stiff froth, three-fourths of a pound of flour, one pound sugar, ten ounces butter. Flavor with lemon or rosewater.

Ginger Cookies.—One cup sugar, one of butter, one of molasses, one table-spoonful ginger, one of cinnamon, and two tea-spoonsfuls of saleratus dissolved in three table-spoonsful of hot water. Bake quickly.

Rye Drop Cakes.—One pint milk, three eggs, one table-spoonful sugar, a little salt. Stir in rye flour till about the consistency of pancakes. Bake in buttered cups or saucers, half an hour.

Honey Cake.—One cup nice sugar, one cup rich sour cream, one egg, half a tea-spoonful of soda, two cups flour. Flavor to the taste. Bake half an hour. To be eaten while warm.

Common Soft Ginger Bread.—One cup molasses, one cup sour cream, one and a half tea-spoonsful ginger, one heaping tea-spoonful saleratus, three cups flour, a little salt. Bake in a moderately heated oven.

Plain Rice Pudding.—Swell a tea-cupful of rice in a quart of boiling water: add a cup of sugar, three quarts of milk, and a little salt. Bake three hours.

To take Wagon Grease from Clothes.—Lay the article on a linen towel, pour a little spirits of turpentine on a cloth, and rub it until quite dry. This will not injure the most delicate colors.

To Clean Floors and Erase Grease Spots.—To a pailful of hot soap-suds, take three table-spoonsful of spirits of turpentine, and you will have a clean floor.

EGYPTIAN WHEAT.—The *Scotsman* says that "some stalks of wheat were laid before the Paris Academy of Sciences on the 2d of March, derived from five grains found in an Egyptian tomb by a Monsieur DROUILARD, (since deceased,) sown in 1849, and which yielded a return of 1,200 for 1. Since 1853, grains of this wheat have been pretty widely disseminated; and the results of various experiments upon it, made under the direction of the local authorities, and of certain members of the Agricultural Society of Morlaix, nominated by the Sub-Prefect to inquire into the subject, were submitted to the Academy. They were in substance as follows: Sown broadcast on one-half of a piece of land, of which the other half was sown with the common wheat of the country, the return was 60 for 1, while that of the latter was 15 for 1; and the mean return in France is 7 or 8 for 1. The same Egyptian wheat, sown grain by grain in a line, gave a return of 556 for 1. The wheat, since its fecundity became known, has been much in request, and is sold at four or five times the price of common wheat. The stalks submitted to the Academy were more than two metres (six and a half feet) in length, and each carried from twenty to forty fine ears."

MR. TITUS SALT, an eminent English manufacturer, has succeeded in introducing the Alpaca sheep and the Angora goat into the mountainous region of South Australia. Mr. S. was the first to demonstrate that the wool of the Alpaca could be worked up into a woven fabric, and it is now in considerable demand. The weight of fleece is said to be about ten pounds, and it brings about sixty cents per pound in the raw state. The wool of the Angora goat is worth about seventy cents per pound. The animals were obtained with considerable difficulty, on account of the jealousy of the Peruvian government, in whose country the Alpaca is only found. They were taken to England and kept for some time on a farm, prior to being shipped to Australia.

THE WHEAT CROP IN INDIANA.—Our esteemed correspondent, ELIJAH THOMAS, of Independence, Warren Co., Ind., writes that "the wheat crop looks very well; like other crops, it is backward, and we have not yet commenced harvesting, but, if nothing befals it, there will be more wheat raised in this portion of Indiana than has ever been grown in one year heretofore. The prospect for oats and grass has never been better."

QUALITY OF BEEF.—At the International Fat Cattle Show, at Paris, the beef of the prize animals was brought to the table *roasted*. The Judges awarded as to *quality*: West Highland ox, Scotch, first; Devon ox, second; French ox, third; Short-horn and Angus, Scotch cross, fourth; Angus, Scotch, fifth; French ox, sixth; Short-horn, English, seventh; French, eighth. For *soup* and *boiled* beef, the English Short-horn English ox, first.

POOR BUTTER.—The Committee on Dairy Products, at the Worcester Co. (Mass.) Agricultural Society, say in their Report: "PHARAOH, with all his ingenuity, never invented for the Children of Israel a more intolerable infliction than he could have done if he had imposed upon them the penalty of being obliged to eat poor butter."

PROLIFIC LAWTON BLACKBERRIES.—We had the pleasure of seeing, a few days since, a fine plantation of New Rochelle blackberries, on the grounds of Mr. C. P. BISSELL, of this city. On one stalk, by actual count, there were *three hundred and sixty-two perfect berries*, and there were other stalks in the same hill covered with fruit. The bearing plants were set out last year.

THE GREAT NATIONAL TRIAL OF REAPERS AND MOWERS AT SYRACUSE is in progress at the time we go to press (July 21). Though fewer machines were entered than was expected, the trial has been one of great interest. We understand that the awards will not be made till the meeting of the United States Agricultural Society, to be held at Louisville, Ky., October 1—6.

JAPAN PEAS.—The editor of the *North Western Farmer*, an excellent monthly published at Dubuque, Iowa, has tried to raise Japan peas for three years in succession; but though he got plenty of vines, he obtained only a few half grown peas. They will ripen in this section under very favorable circumstances, but must be regarded as very uncertain.

"CHARCOAL A CURE FOR THE STRIPED BUG.—It may be implicitly depended upon. Dust it on from a seive or coal-sifter. If the rains wash it off, put it on again. We have used soot with good effect, but recommend charcoal-dust on the strength of the most reliable personal testimony—there is no humbug in it." So says the *Homestead*.

TURNIPS may be sown to good advantage on places where early vegetables have ripened in the garden; and by doing so, we may have a good many excellent dinners some of the cold days that we expect during the winter.

Gates, N. Y. D.

RECEIPTS FOR PRESERVING FRUITS, &C.—We should feel greatly obliged to any of our lady readers for seasonable receipts for preserving fruits, vegetables, &c.

EDWARD EVERETT will deliver the address at the New York State Fair, to be held at Buffalo, October 6th to 9th.

Inquiries and Answers.

(JOHN LOWE, Fayetteville.) In this section, the British Queen strawberry is not worth cultivating. In the Southern States, it is said to do better. When well grown, it is considerably larger than Hovey's Seedling.

The Boston Pine will fertilize Hovey's Seedling equally as well as the Early Scarlet.

The Hooker is one of the largest and best staminates we are acquainted with. It may not do as well with you as with us, but it is eminently worthy a trial.

(M. A. RICHARDSON, Sherman, N. Y.) The cheapest way of deodorizing night soil is to mix it with dry muck. We know of no chemical process that can be profitably applied.

(S. L., Windsor.) The best way to destroy rose-bugs, is to syringe the under side of the leaves with tobacco water. See Mr. SALTER's article in last number, page 222.

(J. R., Michigan.) GAS LIME.—You are mistaken in supposing that gas lime contains a large quantity of ammonia. We are aware that some writers have made such a statement, but it is certainly without foundation. Chemical analysis indicates—or we would rather say *demonstrates*—that gas lime is of less value than common lime. Practical experience confirms this. In England, where many experiments have been made with it, gas lime sells for less than fresh lime from the kiln.

(H. R. DENROCHE, Phelpsville.) Hemlock tan-bark is an excellent mulch for strawberries; we do not think it has much fertilizing value. Some "special manure" writers have argued that its tannic acid is very valuable for strawberries. Of this, however, there is no evidence. You had better get the tan-bark now, and put it in a heap where it will dry. If turned over occasionally and exposed to the air, so much the better. We regard tan-bark as the best of all waste substances to mulch with.

(R. G.) TURNIP FLY.—As soon as the turnip plants appear, dust them with a little air-slacked lime. A quart of *slacked* lime to the square rod, or five bushels per acre, is about the proper quantity. This remedy has proved very generally effectual. If you try it, please report the result.

(B. R., C. W.) You can obtain the New Rochelle or Lawton Blackberry at most of the leading nurseries. Mr. C. P. BISSELL, of this city, who is making the cultivation of this fruit somewhat of a specialty, will undoubtedly be able to satisfactorily fill your order this fall.

(C. E. HILDRETH.) The oat crop is one of the worst that can be sown in an orchard. If you must sow some crop, let it be beans, potatoes, corn, or some other crop that can be horse-hoed.

BEST TIME TO CUT CHESTNUT TIMBER FOR RAILS AND POSTS.—In reply to the inquiry of Mr. HARRIS, an experienced correspondent says: "The best time to cut chestnut timber for rails and posts, is—when the farmer seldom has time to do it—in July and August, when the bark peels; and if he will fell a few trees then, and take particular notice, he will find that all the little limbs will season hard, and remain sound longer than those cut in the following spring."

GARGET.—In reply to the inquiry in your paper, I would state that I have, on two occasions, inserted a piece of garget root in the dewlap, and it effected a perfect cure. S. K. GIVEN.—*Sheepcot Bridge, Md.*

THE weather is such that it is an excuse for not working out of doors; so I have concluded to write a few lines to you, for the purpose of obtaining a little information. The weather here has been exceedingly wet, and vegetation came forward very late and backward; for example, apple trees have but just shed their blossoms. Many people have not planted their potatoes; some are but just done sowing oats, and several have not sown all they wanted. The reason of their being so late is—first, the lateness of the spring, when they could commence their spring's work; and second, the uncommon quantity of rain and wetness of the ground. There has been but a small part of the time that the ground has been dry enough to work. Now, what can we do to forward our work, such cold, wet and backward springs? I would suggest that we do most of our plowing in the fall, so that, when the ground is dry enough, we will lose no time in putting in our crops. You may say, underdrain it; but will it pay on our hilly, hard-pan land, where the hard-pan is from six to twenty inches under the surface, and not much of it over one foot, and farms sell at from fifteen to twenty dollars per acre, and no drain tile to be had? Now, Messrs. Editors, you may suggest something that might benefit us. By the way, would you recommend the use of the subsoil plow on the above described land? I. RANDALL.—*Masonville, Delaware Co., N. Y., June 15.*

We hope some of our correspondents will discuss this subject.

CULTURE OF GRAPES.—I would like to see an article in the *Farmer* on the cultivation of the grape, commencing in the spring when the cutting is planted, and then give the work of each year distinct until after the vine has commenced to bear fruit; and to designate the sort of grape whose cultivation they are describing, as there is a difference in pruning best suited to different varieties. Dr. WARDER, in the *Rural Annual* for 1856, wrote well on grape culture, but his remarks are mainly in reference to the Catawba, and I think on that he might have been more definite. All that I have seen written on the grape, appears better suited for the instruction of those who have had some experience, rather than for the new beginner. W. LIVINGSTON.—*Laurenceburg, Pa.*

Will some of our readers give us an article on the culture of the grape?

I WOULD inquire through your columns for the best and cheapest method of improving my land. The soil is a gravelly, sandy loam, intermixed with slate. Timber—oak, chestnut, sugar, and some hickory, with a little birch, beech and ash. Subsoil well mixed with sand and gravel. Would it be well to plow deep? The soil is only about four inches thick. Lime and plaster have been applied with very little success. Lime has, in some cases, helped a little. Manure will not last long. Would buckwheat and clover be beneficial as a manuring crop, to be plowed under? Sorrel prevails to some extent. If lime should be applied, please state the number of bushel per acre. HENRY ALLFATHER.—*Berlin, Somerset Co., Pa.*

Will some of our experienced correspondents answer the above?

I WISH to inquire through the *Genesee Farmer* if it is necessary to underdrain land consisting of alluvial, loamy soil, two feet deep, resting on a layer of loam and gravel, quite compact, of about a foot in depth, then loose gravel, the depth of which is not known. We have dug thirty feet, and gravel continued. Water does not usually remain on the surface, even after heavy showers. Would a garden be materially benefited by underdraining on such land? Our garden is on such land, and it sometimes bakes pretty hard. How can that be prevented? or, what is the cause? for it did not formerly bake at all. There are thousands of angle-worms, sometimes called "crawlers;" do they do any mischief? D. EDWARDS.—*Little Genesee, N. Y.*

THE grading of our street has removed all the surface soil, and left me nothing but a miserably poor, compact slate, in which to plant street trees. How shall I do? And what trees will do best *in such a locality?* Your item in regard to "Six Good Shade Trees," in the July *Farmer*, leaves me in the dark as to which of the varieties is best adapted to my *slate*, and my hard, tough *clay*. Will the sugar maple do well? And does the American elm bear clipping well? I. P. I.—*Hollidaysburg, Pa.*

WOULD it not be good policy to build dams across shower brooks, and other small streams, to stop leaves and other substances that are carried down and lost to the farmer? Perhaps some of your correspondents can tell whether it would pay to dam such streams for the manure. C. E. HILDRETH.

No doubt many of the very numerous readers of the *Genesee Farmer* know something about the cause and treatment of horses that are stove in the shoulder. I would like very much to ask, through its columns, for some information about it, as I have a valuable horse quite lame in the fore feet, and I am told that this is the cause. The lameness is scarcely perceptible when he is in motion; but let him stand still for some time, and he moves off quite lame. By inserting this, and drawing out the opinions of some of your many intelligent readers, you will much oblige a subscriber. J. A. Gavin.—*Bluffton, Ind.*

Can you inform me of a remedy for small red ants in fruit and vegetable gardens, and also how I can raise good radishes? I cannot get any free from grubs. A small white grub makes them good for nothing; and the ants are very injurious. John Parry.—*Fort Edward, N. Y.*

Grass for Low Lands.—I have heard it said that Ribbon grass (I do not know the scientific name) will grow well on marshy grounds, and form a smooth, tough turf, that will bear up a team, and makes good hay or pasture. Have your readers had any experience with it? H.

I have an excellent cow, that loses a large portion of her milk by leakage. If you, or any of your thousands of readers, can give a remedy, through your journal, by which I can secure the milk, they will confer a favor on more than one individual. D.—*Gates, N. Y.*

Mushrooms.—Will some of your correspondents inform me where mushroom spawn can be obtained, and at what price, together with some hints in regard to the cultivation of this delicious fungus? Consulting.—*Nassaugaga, C. W.*

ADVERTISEMENTS.

To secure insertion in the Farmer, must be received as early as the 10th of the previous month, and be of such a character as to be of interest to farmers. Terms—Two Dollars for every hundred words, each insertion, paid in advance.

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It is unnecessary for me to give a list of all the Estates at this time in my possession for sale; suffice it to say, that whether those in want desire either Arable or Timber Land, I can supply them.

☞ All letters promptly answered. My post-office is *Lancaster Court House, Virginia.* B. H. ROBINSON.
August 1.—1t.

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Mr. W. S. G. KNOWLES has received instructions from FREDERICK WM. STONE, Esq., to sell by AUCTION, at MORETON LODGE, on WEDNESDAY, THE SIXTEENTH DAY OF SEPTEMBER NEXT, upwards of 50 head of Imported and Pure-bred Shorthorned Cattle, comprising Bulls, Cows and Heifers, of different ages. Also, 15 Imported and Pure-bred Cotswold Rams, 5 Ram and 10 Imported South down Ewes, and 10 Ram Lambs; 3 Imported Berkshire Boars, and a number of Berkshire and Yorkshire Pigs, of the Small Breed, from stock imported in 1856.

The greater portion of the stock at Moreton Lodge are imported animals from the Herds of Sir Charles Knightly, Col. Kingscote, Capt. Gunter, Messrs. Tanqueray, Bowly, Jonas Webb, Bolden, Sandy, Mortons, and Henry Ambler, selected by James Knowles, Esq., whose judgment in the selection and management of the celebrated Tortworth Herd (late Lord Ducie's) is a guarantee of the Moreton Lodge Herd, as respects first class blood, fine quality, good symmetry, and milking qualities.

This sale offers to the Breeders of North America the rare opportunity of obtaining FIRST CLASS STOCK, without the risk of a sea voyage, and great expense connected therewith; and offers to our American friends a selection from many of the First Herds of England, at a small cost of time and money to obtain them. The Cotswold Sheep are from the Flocks of Messrs. Slatter, Rick and Beale Brown; the South-downs from Sir R Thockmorton's Flock, and from the same stock as the Prize Wethers for several years successful winners at the Birmingham and Smithfield Shows; the Pigs from Sir R. Thockmorton's and Capt. Gunter's stock.

☞ Parties from Lower Canada and the Eastern States, reaching Toronto on the 15th, can leave at 8 A. M. on the 16th by the Grand Trunk Railroad and arrive at Guelph at 10 A. M.; and from the Western States, viz. the Great Western Railroad leaving Windsor in the early morning train on the 15th, reach Guelph the same afternoon.

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☞ Refreshments at eleven; sale to commence punctually at twelve o'clock.

☞ Catalogues are in preparation, with Pedigrees, &c., and will be ready for delivery by the 15th of August.

Moreton Lodge, Guelph, C. W., Aug. 1, 1857.—2t*

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To secure a Machine, order immediately. Though so little known the past season, and none ready for delivery till the first of May, yet not two-thirds of the customers could be supplied. The reputation of the Machine is now widely established, so that 5,000 will not as nearly supply the demand as 2,800 did last year.

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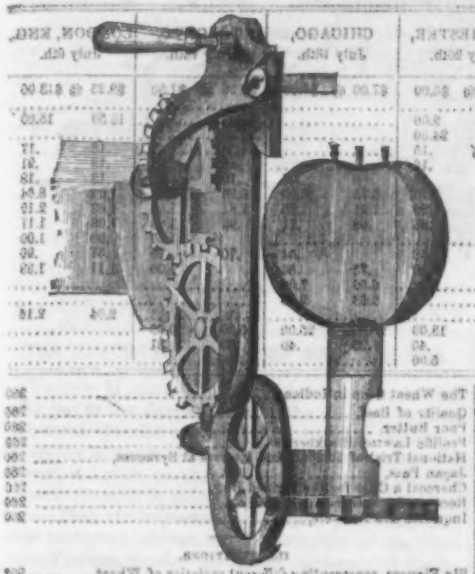
☞ H. F. HAFGOOD, of Rochester, N. Y., is the General Agent for the above Machine in New York, to whom all letters relative to sales, &c., in this State should be addressed. Traveling and Local Agents wanted. June 1.—6t

PRATT'S AUTOMATON APPLE SLICER.



THE accompanying cut represents a Machine for Cutting and slicing Apples, patented by E. L. Pratt, November 11th, 1856.

Perhaps in no class of articles or utensils for family use, has as manifest an improvement been attained as in Machines for Paring and Slicing Apples. Five years have hardly elapsed since a patent was granted to the same party for a Machine for Paring Apples.—Such has been its popularity, that many hundred thousands have already been manufactured and sold. The introduction of the Parer enables one person, or even a child, to accomplish as much labor as eight or ten persons could do by the old process of paring by hand.

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May 1, 1857.—1y.

Prices of Agricultural Products at the Principal Markets in the United States, Canada and England.

	NEW YORK, July 20th.		PHILADELPHIA, July 18th.		ROCHESTER, July 20th.		CHICAGO, July 18th.		TORONTO, July 18th.		LONDON, ENG., July 6th.	
Beef, per 100 lbs.	$10.00 @	$12.00	$11.50 @	$12.50	$5.75 @	$6.00	$7.00 @	$8.00	$7.00 @	$7.50	$8.25 @	$13.00
do mess, per bbl.	28.00	31.00										
Pork, per 100 lbs.	7.75	8.25			8.00	9.00					10 50	15.00
do mess, per bbl.	19.25	19.50	19.00	23.50		24.00						
Lard, per lb.,	.14¾	.15	.15	.16	.14¾	.15					.13	.17
Butter, do	.15	.24	.14	.19	.12	.16			.25	.30	.18	.21
Cheese, do	.08	.09			.08	.10	.06	.07	.10	.12½	.13	.18
Flour, per bbl.	6 25	10 50	7.00	9.50	7.00	8.75	5.75	6.00	6.25	8.00	7.92	8.64
Wheat, per bush.	1.50	1.95	1.85	1.93	1.85	1.90	1.21	1.75	1.61	1.85	1.62	2.19
Corn, shelled, per bu.	.83	.85	.85	.87		.88	.68	.71	.95	1.00	1.08	1.17
Rye, do	1.15	1.16	1.05	1.10						1.00	.90	1.00
Oats, do	.58	.65	.55	.56	.50	.56		.54	.70	.75	.57	.99
Barley, do						1.00	.75	.80		1.00	1.11	1.32
Clover Seed, do			7.00	7.50			6.50	7.00				
Timothy Seed, do			4.00	4.50			2.63	2.75				
Flax Seed, do				1.95							2.04	2.16
Hay, per ton,					8.00	12.00	20.00	25.00	16.00	20.00		
Wool, per lb.	.36	.42	.35	.62½	.36	.40	.25	.40	.30	.31		
Wood, hard, per cord,					4.50	5.00						

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